

SEQUENCE LISTING

<110> Padigaru, Muralidhara
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Smithson, Glennnda



<120> Novel Proteins and Nucleic Acids Encoding Same

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<140> 09/844,861

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<150> 60/199,960

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<150> 60/225,226

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<170> PatentIn Ver. 2.1

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 Phe Val Ile Gln Thr Glu Gln Ser Leu His Gln Pro Met Phe Tyr Phe
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 Pro Lys Met Leu Gly Ile Phe Trp Phe Asn Leu Gly Glu Ile Ala Phe
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 Gly Ala Cys Ile Thr Gln Met Tyr Thr Ile His Ile Cys Thr Gly Leu
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 210 215 220
 Phe His Leu Pro Ala Trp Asp Ala Arg Leu Lys Ala Leu Ser Thr Cys
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Gly Val Pro Gly Leu Glu Ala Thr His Ile Trp Ile Ser Leu Pro Phe
          35              40              45

Cys Phe Met Tyr Ile Ile Ala Val Val Gly Asn Cys Gly Leu Ile Cys
          50              55              60

Leu Ile Ser His Glu Glu Ala Leu His Arg Pro Met Tyr Tyr Phe Leu
          65              70              75              80

Ala Leu Leu Ser Phe Thr Asp Val Thr Leu Cys Thr Thr Met Val Pro
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Asn Met Leu Cys Ile Phe Trp Phe Asn Leu Lys Glu Ile Asp Phe Asn
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Ala Cys Leu Ala Gln Met Phe Phe Val His Met Leu Thr Gly Met Glu
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Ser Gly Val Leu Met Leu Met Ala Leu Asp Arg Tyr Val Ala Ile Cys
          130              135              140

Tyr Pro Leu Arg Tyr Ala Thr Ile Leu Thr Asn Pro Val Ile Ala Lys
          145              150              155              160

Ala Gly Leu Ala Thr Phe Leu Arg Asn Val Met Leu Ile Ile Pro Phe
          165              170              175

Thr Leu Leu Thr Lys Arg Leu Pro Tyr Cys Arg Gly Asn Phe Ile Pro
          180              185              190

His Thr Tyr Cys Asp His Met Ser Val Ala Lys Val Ser Cys Gly Asn
          195              200              205

Phe Lys Val Asn Ala Ile Tyr Gly Leu Met Val Ala Leu Leu Ile Gly
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Val Phe Asp Ile Cys Cys Ile Ser Val Ser Tyr Thr Met Ile Leu Gln
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His Ile His Ile Ile Val Ala Asn Leu Tyr Leu Leu Leu Pro Pro Thr
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Leu Cys Thr Met Tyr Ser Ile Ala Ile Thr Gly Asn Phe Gly Leu Met
 35 40 45

Tyr Leu Ile Tyr Cys Asp Glu Ala Leu His Arg Pro Met Tyr Val Phe
 50 55 60

Leu Ala Leu Leu Ser Phe Thr Asp Val Leu Met Cys Thr Ser Thr Leu
 65 70 75 80

Pro Asn Thr Leu Phe Ile Leu Trp Phe Asn Leu Lys Glu Ile Asp Phe
 85 90 95

Lys Ala Cys Leu Ala Gln Met Phe Phe Val His Thr Phe Thr Gly Met
 100 105 110

Glu Ser Gly Val Leu Met Leu Met Ala Leu Asp His Cys Val Ala Ile
 115 120 125

Cys Phe Pro Leu Arg Tyr Ala Thr Ile Leu Thr Asn Ser Val Ile Ala
 130 135 140

Lys Ala Gly Phe Leu Thr Phe Leu Arg Gly Val Met Leu Val Ile Pro
 145 150 155 160

Ser Thr Phe Leu Thr Lys Arg Leu Pro Tyr Cys Lys Gly Asn Val Ile
 165 170 175

Pro His Thr Tyr Cys Asp His Met Ser Val Ala Lys Ile Ser Cys Gly
 180 185 190

Asn Val Arg Val Asn Ala Ile Tyr Gly Leu Ile Val Ala Leu Leu Ile
 195 200 205

Gly Gly Phe Asp Ile Leu Cys Ile Thr Ile Ser Tyr Thr Met Ile Leu
 210 215 220

Gln Ala Val Val Ser Leu Ser Ser Ala Asp Ala Arg Gln Lys Ala Phe
 225 230 235 240

Ser Thr Cys Thr Ala His Phe Cys Ala Ile Val Leu Thr Tyr Val Pro
 245 250 255

Ala Phe Phe Thr Phe Phe Thr His His Phe Gly Gly His Thr Ile Pro
 260 265 270

Leu His Ile His Ile Ile Met Ala Asn Leu Tyr Leu Leu Met Pro Pro
 275 280 285

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 35 40 45
 Phe Val Ile Gln Thr Glu Gln Ser Leu His Gln Pro Met Phe Tyr Phe
 50 55 60
 Leu Ala Met Leu Ala Gly Thr Asp Leu Gly Leu Ser Thr Ala Thr Ile
 65 70 75 80
 Pro Lys Met Leu Gly Ile Phe Trp Phe Asn Leu Gly Glu Ile Ala Phe
 85 90 95
 Gly Ala Cys Ile Thr Gln Met Tyr Thr Ile His Ile Cys Thr Gly Leu

100	105	110
Glu Ser Val Val Leu Thr Val Thr Gly Ile Asp Arg Tyr Ile Ala Ile 115	120	125
Cys Asn Pro Leu Arg Tyr Ser Met Ile Leu Thr Asn Lys Val Ile Ala 130	135	140
Ile Leu Gly Ile Val Ile Ile Val Arg Thr Leu Val Phe Val Thr Pro 145	150	155
Phe Thr Phe Leu Thr Leu Arg Leu Pro Phe Cys Gly Val Arg Ile Ile 165	170	175
Pro His Thr Tyr Cys Glu His Met Gly Leu Ala Lys Leu Ala Cys Ala 180	185	190
Ser Ile Asn Val Ile Tyr Gly Leu Ile Ala Phe Ser Val Gly Tyr Ile 195	200	205
Asp Ile Ser Val Ile Gly Phe Ser Tyr Val Gln Ile Leu Arg Ala Val 210	215	220
Phe His Leu Pro Ala Trp Asp Ala Arg Leu Lys Ala Leu Ser Thr Cys 225	230	235
Gly Ser His Val Cys Val Met Leu Ala Phe Tyr Leu Pro Ala Leu Phe 245	250	255
Ser Phe Met Thr His Arg Phe Gly His Asn Ile Pro His Tyr Ile His 260	265	270
Ile Leu Leu Ala Asn Leu Tyr Val Val Phe Pro Pro Ala Leu Asn Ser 275	280	285
Val Ile Tyr Gly Val Lys Thr Lys Gln Ile Arg Glu Gln Val Leu Arg 290	295	300
Ile Leu Asn Pro Lys Ser Phe Trp His Phe Asp Pro Lys Arg Ile Phe 305	310	315
His Asn Asn Ser Val Arg Gln 325		

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      20             25             30

Phe Cys Ile Val Tyr Leu Ile Ala Ile Val Gly Asn Met Thr Ile Leu
      35             40             45

Phe Val Ile Lys Thr Glu His Ser Leu His Gln Pro Met Phe Tyr Phe
      50             55             60

Leu Ala Met Leu Ser Met Ile Asp Leu Gly Leu Ser Thr Ser Thr Ile
      65             70             75             80

Pro Lys Met Leu Gly Ile Phe Trp Phe Asn Leu Gln Glu Ile Ser Phe
      85             90             95

Gly Gly Cys Leu Leu Gln Met Phe Phe Ile His Met Phe Thr Gly Met
      100            105            110

Glu Thr Val Leu Leu Val Val Met Ala Tyr Asp Arg Phe Val Ala Ile
      115            120            125

Cys Asn Pro Leu Gln Tyr Thr Met Ile Leu Thr Asn Lys Thr Ile Ser
      130            135            140

Ile Leu Ala Ser Val Val Val Gly Arg Asn Leu Val Leu Val Thr Pro
      145            150            155            160

Phe Val Phe Leu Ile Leu Arg Leu Pro Phe Cys Gly His Asn Ile Val
      165            170            175

Pro His Thr Tyr Cys Glu His Arg Gly Leu Ala Gly Leu Ala Cys Ala
      180            185            190

Pro Ile Lys Ile Asn Ile Ile Tyr Gly Leu Met Val Ile Ser Tyr Ile

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195	200	205
Ile Val Asp Val Ile Leu Ile Ala Ser Ser Tyr Val Leu Ile Leu Arg		
210	215	220
Ala Val Phe Arg Leu Pro Ser Gln Asp Val Arg Leu Lys Ala Phe Asn		
225	230	235
Thr Cys Gly Ser His Val Cys Val Met Leu Cys Phe Tyr Thr Pro Ala		
	245	250
Phe Phe Ser Phe Met Thr His Arg Phe Gly Gln Asn Ile Pro His Tyr		
	260	265
Ile His Ile Leu Leu Ala Asn Leu Tyr Val Val Val Pro Pro Ala Leu		
	275	280
Asn Pro Val Ile Tyr Gly Val Arg Thr Lys Gln Ile Arg Glu Gln Ile		
	290	295
Val Lys Ile Phe Val Gln Lys Glu		
305	310	

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 <213> Homo sapiens

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Leu Ile Tyr Gly Val Thr Leu Leu Ala Asn Leu Gly Met Ile Ala Leu	35	40	45
Ile Gln Val Ser Ser Arg Leu His Thr Pro Met Tyr Phe Phe Leu Ser	50	55	60
His Leu Ser Ser Val Asp Phe Cys Tyr Ser Ser Ile Ile Val Pro Lys	65	70	75
Met Leu Ala Asn Ile Phe Asn Lys Asp Lys Ala Ile Ser Phe Leu Gly	85	90	95
Cys Met Val Gln Phe Tyr Leu Phe Cys Thr Cys Val Val Thr Glu Val	100	105	110
Phe Leu Leu Ala Val Met Ala Tyr Asp Arg Phe Val Ala Ile Cys Asn	115	120	125
Pro Leu Leu Tyr Thr Val Thr Met Ser Trp Lys Val Arg Val Glu Leu	130	135	140
Ala Ser Cys Cys Tyr Phe Cys Gly Thr Val Cys Ser Leu Ile His Leu	145	150	155
Cys Leu Ala Leu Arg Ile Pro Phe Tyr Arg Ser Asn Val Ile Asn His	165	170	175
Phe Phe Cys Asp Leu Pro Pro Val Leu Ser Leu Ala Cys Ser Asp Ile	180	185	190
Thr Val Asn Glu Thr Leu Leu Phe Leu Val Ala Thr Leu Asn Glu Ser	195	200	205
Val Thr Ile Met Ile Ile Leu Thr Ser Tyr Leu Leu Ile Leu Thr Thr	210	215	220
Ile Leu Lys Met Gly Ser Ala Glu Gly Arg His Lys Ala Phe Ser Thr	225	230	235
Cys Ala Ser His Leu Thr Ala Ile Thr Val Phe His Gly Thr Val Leu	245	250	255
Ser Ile Tyr Cys Arg Pro Ser Ser Gly Asn Ser Gly Asp Ala Asp Lys	260	265	270
Val Ala Thr Val Phe Tyr Thr Val Val Ile Pro Met Leu Asn Ser Val	275	280	285
Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Glu Ala Leu Arg Lys Val	290	295	300
Met Gly Ser Lys Ile His Ser			

<210> 13
 <211> 1050
 <212> DNA
 <213> Homo sapiens

<400> 13
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 tccatctttt attcttaatg gaatacctgg tctggaaaga gtacatgtat ggatctccct 120
 cccactctgc acaatgtaca tcatcttcct tgtggggaat cttgggtcttg tgtacctcat 180
 ttattatgag gagtccttac atcatccgat gtattttttt ttgggccatg ctctctccct 240
 cattgacctc cttacctgca ccaccactct acccaatgca ctctgcatct tctgggttcag 300
 tctcaaagaa attaaacttca atgcttgctt ggcccagatg ttctttgttc atgggttcac 360
 aggtgtggag tctgggggtgc tcatgctcat ggctctagac cgctatgtag ccatttgcta 420
 ccctttgagt tatgtacca cactcaccaa ccctatcatt gccaaggctg agcttgccac 480
 ctctctgagg ggtgtattgc tgatgattcc tttcccatc ttgggttaagc gtttgccctt 540
 ctgccaagc aatattatct cccatacgtat ctgcgaccac atgtctgtag taaagctatc 600
 ttgtgcccag atcaagggtca atgtaatacta tgggtctaagc gttgctctcc tgattggagt 660
 gtttgacatt tgttgatat ctttgtctta cactttgatc ctcaaggcag cgatcagcct 720
 ctcttcatca gatgctcggc agaaggcttt cagcacctgc actgccata tatctgccat 780
 catcatcacc tatgttccag cattcttcac tttctttgcc caccgttttg ggggacacac 840
 aattccccct tctcttcaca tcattgtggc taatctttat cttcttcttc ccccaactct 900
 aaaccctatt gtttatggag taaagacaaa acagatacgc aagagtgtca taaagtctct 960
 ccagggtgat aagggtgcag gttgattcaa ggcaacttaa ttcagatgga agaaagataa 1020
 atgaaaaata acaaagaata aacttacgtg 1050

<210> 14
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 14
 Met Pro Leu Phe Asn Ser Leu Cys Trp Phe Pro Thr Ile His Val Thr
 1 5 10 15
 Pro Pro Ser Phe Ile Leu Asn Gly Ile Pro Gly Leu Glu Arg Val His
 20 25 30
 Val Trp Ile Ser Leu Pro Leu Cys Thr Met Tyr Ile Ile Phe Leu Val
 35 40 45
 Gly Asn Leu Gly Leu Val Tyr Leu Ile Tyr Tyr Glu Glu Ser Leu His
 50 55 60
 His Pro Met Tyr Phe Phe Phe Gly His Ala Leu Ser Leu Ile Asp Leu
 65 70 75 80
 Leu Thr Cys Thr Thr Thr Leu Pro Asn Ala Leu Cys Ile Phe Trp Phe
 85 90 95
 Ser Leu Lys Glu Ile Asn Phe Asn Ala Cys Leu Ala Gln Met Phe Phe
 100 105 110
 Val His Gly Phe Thr Gly Val Glu Ser Gly Val Leu Met Leu Met Ala

115	120	125
Leu Asp Arg Tyr Val Ala Ile Cys Tyr Pro Leu Arg Tyr Ala Thr Thr 130	135	140
Leu Thr Asn Pro Ile Ile Ala Lys Ala Glu Leu Ala Thr Phe Leu Arg 145	150	155 160
Gly Val Leu Leu Met Ile Pro Phe Pro Phe Leu Val Lys Arg Leu Pro 165	170	175
Phe Cys Gln Ser Asn Ile Ile Ser His Thr Tyr Cys Asp His Met Ser 180	185	190
Val Val Lys Leu Ser Cys Ala Ser Ile Lys Val Asn Val Ile Tyr Gly 195	200	205
Leu Met Val Ala Leu Leu Ile Gly Val Phe Asp Ile Cys Cys Ile Ser 210	215	220
Leu Ser Tyr Thr Leu Ile Leu Lys Ala Ala Ile Ser Leu Ser Ser Ser 225	230	235 240
Asp Ala Arg Gln Lys Ala Phe Ser Thr Cys Thr Ala His Ile Ser Ala 245	250	255
Ile Ile Ile Thr Tyr Val Pro Ala Phe Phe Thr Phe Phe Ala His Arg 260	265	270
Phe Gly Gly His Thr Ile Pro Pro Ser Leu His Ile Ile Val Ala Asn 275	280	285
Leu Tyr Leu Leu Leu Pro Pro Thr Leu Asn Pro Ile Val Tyr Gly Val 290	295	300
Lys Thr Lys Gln Ile Arg Lys Ser Val Ile Lys Phe Phe Gln Gly Asp 305	310	315 320
Lys Gly Ala Gly		

<210> 15
 <211> 1050
 <212> DNA
 <213> Homo sapiens

<400> 15
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 gctaacgaca cccagttcca tacttcttca ttctactgc tgggtatccc agggctagaa 120
 gatgtgcaca tctggattgg attccctttt ttctctgtgt atcttattgc actcctggga 180
 aatgctgcta tcttctttgt gatccaaact gagcagagtc tccatgagcc catgtactac 240
 tgcctggcca tgttgattc cattgacctg agcttgtcta cggccaccat tcccaaaatg 300
 ctgggcatct tctggttcaa tatcaaggaa atatcttttg gaggctacct ttctcagatg 360
 ttcttcatcc atttcttcac tgtcatggag agcatcgat tgggtggccat ggcctttgac 420
 cgctacattg ccatttgcaa acctctttgg tacaccatga tcttcaccag caaaatcatc 480
 agcctcattg caggcattgc tgtcctgagg agcttgtaca tggtcattcc actggtgttt 540

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ctcctcttaa ggttgccctt ctgtggacat cgtatcatcc ctcatactta ctgtgagcac 600
atgggcattg cccgtctggc ctgtgccagc atcaaagtca acattatgtt tggctctggc 660
agtatttctc tcttggtatt ggaatgtgctc cttattattc tctcccatat caggatcctc 720
tatgctgtct tctgcctgcc ctccctgggaa gctcgactca aagctctcaa cacctgtggc 780
tctcacattg gtgttatctt agccttttct acaccagcat ttttctcttt ctttacacac 840
tgctttggcc atgatattcc ccaatatatc cacattttct tggctaattct atatgtgggt 900
gttcctccca cctcaatcc tgtaatctat ggggtcagaa ccaaacatat tagggagaca 960
gtgctgagga ttttcttcaa gacagatcac taaccagttg gagtttggag ggtctctctt 1020
agcattcatg atgaagcagc cactagggag                                     1050

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<210> 16
 <211> 317
 <212> PRT
 <213> Homo sapiens

<400> 16

Met	Glu	Lys	Ser	Asn	Val	Ser	Ser	Val	Tyr	Gly	Phe	Ile	Leu	Val	Gly
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Phe	Ser	Asp	Arg	Pro	Lys	Leu	Glu	Met	Val	Leu	Phe	Thr	Val	Asn	Phe
			20					25					30		
Ile	Leu	Tyr	Ser	Val	Ala	Val	Leu	Gly	Asn	Ser	Thr	Ile	Ile	Leu	Val
		35					40					45			
Cys	Ile	Leu	Asp	Ser	Gln	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Ala
	50					55					60				
Asn	Leu	Ser	Phe	Leu	Asp	Leu	Cys	Phe	Ser	Thr	Ser	Cys	Ile	Pro	Gln
65					70					75				80	
Met	Leu	Val	Asn	Leu	Trp	Gly	Pro	Asp	Lys	Thr	Ile	Ser	Cys	Ala	Gly
			85					90						95	
Cys	Val	Val	Gln	Leu	Phe	Ser	Phe	Leu	Ser	Val	Arg	Gly	Ile	Glu	Cys
			100					105					110		
Ile	Leu	Leu	Ala	Val	Met	Ala	Tyr	Asp	Ser	Tyr	Ala	Ala	Val	Cys	Lys
		115					120					125			
Pro	Leu	Arg	Tyr	Leu	Val	Ile	Met	His	Leu	Gln	Leu	Cys	Leu	Gly	Leu
	130					135					140				
Met	Ala	Ala	Ala	Trp	Gly	Ser	Gly	Leu	Val	Asn	Ala	Val	Val	Met	Ser
145					150					155				160	
Pro	Leu	Thr	Met	Thr	Leu	Ser	Arg	Ser	Gly	Arg	Arg	Arg	Val	Asn	His
			165						170					175	
Phe	Leu	Cys	Glu	Lys	Pro	Ala	Leu	Ile	Lys	Met	Ala	Cys	Leu	Asp	Val
			180					185					190		
Arg	Ala	Val	Glu	Met	Leu	Ala	Phe	Ala	Phe	Ala	Val	Leu	Ile	Val	Leu
	195					200						205			
Leu	Pro	Leu	Thr	Leu	Ile	Leu	Val	Ser	Tyr	Gly	Tyr	Ile	Ala	Ala	Ala

210 215 220

Val Leu Ser Ile Lys Ser Ala Ala Arg Gln Trp Lys Ala Phe His Thr
 225 230 235 240

Cys Ser Ser His Leu Thr Val Val Ser Leu Phe Tyr Gly Ser Ile Ile
 245 250 255

Tyr Met Tyr Met Gln Pro Gly Asn Ser Ser Ser Gln Asp Gln Gly Lys
 260 265 270

Phe Leu Thr Leu Phe Tyr Asn Leu Val Thr Pro Met Leu Asn Leu Leu
 275 280 285

Ile Tyr Thr Leu Arg Asn Lys Glu Val Lys Gly Ala Leu Lys Lys Val
 290 295 300

Leu Gly Arg Gln Asn Glu Leu Glu Lys Tyr Asp Lys Leu
 305 310 315

<210> 17
 <211> 1050
 <212> DNA
 <213> Homo sapiens

<400> 17
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 gaaaatatga caacacaccg aaatgacacc ctctccactg aagcttcaga ctctctcttg 120
 aattgttttg tcagatcccc cagctggcag cactggctgt ccctgcccct cagcctcctt 180
 ttctctcttg ccgtaggggc caacaccacc ctctgatga ccactctggct ggaggcctct 240
 ctgcaccagc ccctgtacta cctgctcagc ctctctctcc tgctggacat cgtgctctgc 300
 ctcaactgtca tccccaaagg cctgaccatc ttctggtttg acctcaggcc catcagcttc 360
 cctgcctgct tctctccagat gtacatcatg aattgtttcc tagccatgga gtcttgacac 420
 ttcatgggtca tggcctatga tcgttatgta gccatctgcc acccactgag atatccatca 480
 atcatcactg atcaactttgt agtcaaggct gccatgttta ttttgaccag aaatgtgctt 540
 atgactctgc ccactcccat cctttcagca caactccgtt attgtggaag aaatgtcatt 600
 gagaactgca tctgtgcca taatgtctgt tccagactct cctgcgatga tgtcaccatc 660
 aatcaccttt accaatttgc tggaggctgg actctgctag gatctgacct catccttacc 720
 ttctctctct acaccttcat tctgagagct gtgctgagac tcaaggcaga ggggtgccgtg 780
 gcaaaggccc taagcacatg tggctccac ttcatgctca tctcttctt cagcaccatc 840
 cttctggttt ttgtctcac acatgtggct aagaagaaag tctcccctga tgtgccagtc 900
 ttgctcaatg ttctccacca tgtcattcct gcagccctta accccatcat ttacgggggtg 960
 agaaccacaag aaattaagca gggaatgcag aggttggtga agaaagggtg ctaacaagga 1020
 ccactggatc tctgaatatc taaaataaga 1050

<210> 18
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 18
 Met Thr Thr His Arg Asn Asp Thr Leu Ser Thr Glu Ala Ser Asp Phe
 1 5 10 15

Leu Leu Asn Cys Phe Val Arg Ser Pro Ser Trp Gln His Trp Leu Ser

20	25	30
Leu Pro Leu Ser Leu Leu Phe Leu Leu Ala Val Gly Ala Asn Thr Thr		
35	40	45
Leu Leu Met Thr Ile Trp Leu Glu Ala Ser Leu His Gln Pro Leu Tyr		
50	55	60
Tyr Leu Leu Ser Leu Leu Ser Leu Leu Asp Ile Val Leu Cys Leu Thr		
65	70	75
Val Ile Pro Lys Val Leu Thr Ile Phe Trp Phe Asp Leu Arg Pro Ile		
85	90	95
Ser Phe Pro Ala Cys Phe Leu Gln Met Tyr Ile Met Asn Cys Phe Leu		
100	105	110
Ala Met Glu Ser Cys Thr Phe Met Val Met Ala Tyr Asp Arg Tyr Val		
115	120	125
Ala Ile Cys His Pro Leu Arg Tyr Pro Ser Ile Ile Thr Asp His Phe		
130	135	140
Val Val Lys Ala Ala Met Phe Ile Leu Thr Arg Asn Val Leu Met Thr		
145	150	155
Leu Pro Ile Pro Ile Leu Ser Ala Gln Leu Arg Tyr Cys Gly Arg Asn		
165	170	175
Val Ile Glu Asn Cys Ile Cys Ala Asn Met Ser Val Ser Arg Leu Ser		
180	185	190
Cys Asp Asp Val Thr Ile Asn His Leu Tyr Gln Phe Ala Gly Gly Trp		
195	200	205
Thr Leu Leu Gly Ser Asp Leu Ile Leu Ile Phe Leu Ser Tyr Thr Phe		
210	215	220
Ile Leu Arg Ala Val Leu Arg Leu Lys Ala Glu Gly Ala Val Ala Lys		
225	230	235
Ala Leu Ser Thr Cys Gly Ser His Phe Met Leu Ile Leu Phe Phe Ser		
245	250	255
Thr Ile Leu Leu Val Phe Val Leu Thr His Val Ala Lys Lys Lys Val		
260	265	270
Ser Pro Asp Val Pro Val Leu Leu Asn Val Leu His His Val Ile Pro		
275	280	285
Ala Ala Leu Asn Pro Ile Ile Tyr Gly Val Arg Thr Gln Glu Ile Lys		
290	295	300
Gln Gly Met Gln Arg Leu Leu Lys Lys Gly Cys		
305	310	315

<210> 19
 <211> 1151
 <212> DNA
 <213> Homo sapiens

<400> 19
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 atatagaagg tgaagaagcc ctgtaaaaaa tgacaaggag atttccagga gccatgcttc 120
 cctctaatat cacctcaaca catccagctg tctttttgtt ggtaggaatt cctgggtttgg 180
 aacacctgca tgcctggatc tccatcccct tctgctttgc ttataactctg gccctgctag 240
 gcaactgtac ccttctcttc attatccagg ctgatgcagc cctccatgaa cccatgtacc 300
 tctttctggc catgttggca accattgact tggttctttc ttctacaacg ctgccccaaa 360
 tgcttgccat attctgggtc agggatcagg agatcaactt ctttgccctgt ctgggtccaga 420
 tgttcttcct tcaactccttc tccatcatgg agtcagcagt gctgctggcc atggcctttg 480
 accgctatgt ggccatctgc aagccattgc actacacgac ggtcctgact ggggccctca 540
 tcaccaagat tggcatggct gctgtggccc gggctgtgac actaatgact ccactcccct 600
 tcctgctcag acgcttccac tactgccgag gccagtgat tgcccatgac tactgtgaac 660
 acatggctgt ggtaaggctg gcgtgtgggg acactagctt caacaatatc tatggcattg 720
 ctgtggccat gtttagtggt gtgttggacc tgctctttgt tatcctgtct tatgtcttca 780
 tccttcaggc agttctccag cttgcctctc aggaggcccg ctacaaagca tttgggacat 840
 gtgtgtctca cataggtgcc atcctgtcca cctacactcc agtagtcac tcttcagtca 900
 tgcaccgtgt agcccgccat gctgcccctc gtgtccacat actccttgct attttctatc 960
 tccttttccc acccatgggc aatcctatca tatatggagt caagaccaag cagattcgtg 1020
 agtatgtgct cagtctattc cagagaaaga acatgtagat ggatagttct ctttttttat 1080
 cccacttgcc aagtaatgag aatgctggat tgggggttgag gggaaaaatc taaataggaa 1140
 aattgcagag t 1151

<210> 20
 <211> 322
 <212> PRT
 <213> Homo sapiens

<400> 20
 Met Thr Arg Arg Phe Pro Gly Ala Met Leu Pro Ser Asn Ile Thr Ser
 1 5 10 15
 Thr His Pro Ala Val Phe Leu Leu Val Gly Ile Pro Gly Leu Glu His
 20 25 30
 Leu His Ala Trp Ile Ser Ile Pro Phe Cys Phe Ala Tyr Thr Leu Ala
 35 40 45
 Leu Leu Gly Asn Cys Thr Leu Leu Phe Ile Ile Gln Ala Asp Ala Ala
 50 55 60
 Leu His Glu Pro Met Tyr Leu Phe Leu Ala Met Leu Ala Thr Ile Asp
 65 70 75 80
 Leu Val Leu Ser Ser Thr Thr Leu Pro Lys Met Leu Ala Ile Phe Trp
 85 90 95
 Phe Arg Asp Gln Glu Ile Asn Phe Phe Ala Cys Leu Val Gln Met Phe
 100 105 110
 Phe Leu His Ser Phe Ser Ile Met Glu Ser Ala Val Leu Leu Ala Met
 115 120 125

Ala Phe Asp Arg Tyr Val Ala Ile Cys Lys Pro Leu His Tyr Thr Thr
130 135 140

Val Leu Thr Gly Ser Leu Ile Thr Lys Ile Gly Met Ala Ala Val Ala
145 150 155 160

Arg Ala Val Thr Leu Met Thr Pro Leu Pro Phe Leu Leu Arg Arg Phe
165 170 175

His Tyr Cys Arg Gly Pro Val Ile Ala His Cys Tyr Cys Glu His Met
180 185 190

Ala Val Val Arg Leu Ala Cys Gly Asp Thr Ser Phe Asn Asn Ile Tyr
195 200 205

Gly Ile Ala Val Ala Met Phe Ser Val Val Leu Asp Leu Leu Phe Val
210 215 220

Ile Leu Ser Tyr Val Phe Ile Leu Gln Ala Val Leu Gln Leu Ala Ser
225 230 235 240

Gln Glu Ala Arg Tyr Lys Ala Phe Gly Thr Cys Val Ser His Ile Gly
245 250 255

Ala Ile Leu Ser Thr Tyr Thr Pro Val Val Ile Ser Ser Val Met His
260 265 270

Arg Val Ala Arg His Ala Ala Pro Arg Val His Ile Leu Leu Ala Ile
275 280 285

Phe Tyr Leu Leu Phe Pro Pro Met Val Asn Pro Ile Ile Tyr Gly Val
290 295 300

Lys Thr Lys Gln Ile Arg Glu Tyr Val Leu Ser Leu Phe Gln Arg Lys
305 310 315 320

Asn Met

<210> 21
<211> 982
<212> DNA
<213> Homo sapiens

<400> 21
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tccagctgtc tttttgttgg taggaattcc tggtttgaa cacctgcatg cctggatctc 120
catecccttc tgctttgctt atactctggc cctgctaggg aactgtaccc ttctcttcat 180
tatccgggct gatgcagccc tccatgaacc catgtacctc tttctggcca tgttggaac 240
cattgacttg gttctttctt ctacaacgct gcccaaaatg cttgccatat tctggttcag 300
ggatcaggag atcaacttct ttgcctgtct ggtccagatg ttcttccttc actccttctc 360
catcatggag tcagcagtg cgtctggccat ggcctttgac cgctatgtgg ccatctgcaa 420
gccattgcac tacacgacgg tctgactgg gtccctcatc accaagattg gcatggctgc 480
tgtggcccg gctgtgacac taatgactcc actccccttc ctgctcagac gcttccacta 540
ctgccgaggg ccagtgattg cccattgcta ctgtgaacac atggctgtgg taaggctggc 600

gtgtggggac actagcttca acaatatcta tggcattgct gtggccatgt ttattgtggt 660
 gttggacctg ctctttgtta tcctgtctta tgtcttcatc cttcaggcag ttctccagct 720
 tgcctctcag gaggcccgct acaaggcatt tgggacatgt gtgtctcaca taggtgccat 780
 cctgtccacc tacactccag tagtcatctc ttcagtcacg caccgtgtag cccgccatgc 840
 tgccccctcg gtccacatac tccttgctat tttctatctc cttttccac ccgtgggtcaa 900
 tcctatcata tatggagtc agaccaagca gattcgtgag tatgtgctca gtctattcca 960
 gagaaagaac atgtagatgg aa 982

<210> 22

<211> 322

<212> PRT

<213> Homo sapiens

<400> 22

Met	Thr	Arg	Arg	Phe	Pro	Gly	Ala	Met	Leu	Pro	Ser	Asn	Ile	Thr	Ser
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Thr	His	Pro	Ala	Val	Phe	Leu	Leu	Val	Gly	Ile	Pro	Gly	Leu	Glu	His
			20					25					30		
Leu	His	Ala	Trp	Ile	Ser	Ile	Pro	Phe	Cys	Phe	Ala	Tyr	Thr	Leu	Ala
		35					40					45			
Leu	Leu	Gly	Asn	Cys	Thr	Leu	Leu	Phe	Ile	Ile	Arg	Ala	Asp	Ala	Ala
	50						55				60				
Leu	His	Glu	Pro	Met	Tyr	Leu	Phe	Leu	Ala	Met	Leu	Ala	Thr	Ile	Asp
	65				70					75					80
Leu	Val	Leu	Ser	Ser	Thr	Thr	Leu	Pro	Lys	Met	Leu	Ala	Ile	Phe	Trp
			85						90					95	
Phe	Arg	Asp	Gln	Glu	Ile	Asn	Phe	Phe	Ala	Cys	Leu	Val	Gln	Met	Phe
		100					105						110		
Phe	Leu	His	Ser	Phe	Ser	Ile	Met	Glu	Ser	Ala	Val	Leu	Leu	Ala	Met
		115					120					125			
Ala	Phe	Asp	Arg	Tyr	Val	Ala	Ile	Cys	Lys	Pro	Leu	His	Tyr	Thr	Thr
	130					135					140				
Val	Leu	Thr	Gly	Ser	Leu	Ile	Thr	Lys	Ile	Gly	Met	Ala	Ala	Val	Ala
	145				150					155				160	
Arg	Ala	Val	Thr	Leu	Met	Thr	Pro	Leu	Pro	Phe	Leu	Leu	Arg	Arg	Phe
			165					170					175		
His	Tyr	Cys	Arg	Gly	Pro	Val	Ile	Ala	His	Cys	Tyr	Cys	Glu	His	Met
		180					185						190		
Ala	Val	Val	Arg	Leu	Ala	Cys	Gly	Asp	Thr	Ser	Phe	Asn	Asn	Ile	Tyr
		195					200					205			
Gly	Ile	Ala	Val	Ala	Met	Phe	Ile	Val	Val	Leu	Asp	Leu	Leu	Phe	Val
	210					215					220				

Ile Leu Ser Tyr Val Phe Ile Leu Gln Ala Val Leu Gln Leu Ala Ser
 225 230 235 240

Gln Glu Ala Arg Tyr Lys Ala Phe Gly Thr Cys Val Ser His Ile Gly
 245 250 255

Ala Ile Leu Ser Thr Tyr Thr Pro Val Val Ile Ser Ser Val Met His
 260 265 270

Arg Val Ala Arg His Ala Ala Pro Arg Val His Ile Leu Leu Ala Ile
 275 280 285

Phe Tyr Leu Leu Phe Pro Pro Val Val Asn Pro Ile Ile Tyr Gly Val
 290 295 300

Gln Thr Lys Gln Ile Arg Glu Tyr Val Leu Ser Leu Phe Gln Arg Lys
 305 310 315 320

Asn Met

<210> 23
 <211> 980
 <212> DNA
 <213> Homo sapiens

<400> 23
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 taatgcctgc tccgtgccta cctctttccg gctcactggc atccctggcc tggaatccct 120
 gcacatctgg ctctccatcc cctttggctc catgtacctg gtagctgtgc tggggaacat 180
 aaccatcctg gcagtggtaa ggatggagta cagcctgcat cagcccatgt acttcttcc 240
 gtgcattgtt gctgtcattg acttggctct gtcaacctct accatgccc aactactggc 300
 catcttcttg tttgggtgcc acaacattgg tgtaaatgcc tgtttggccc agatgttctt 360
 cattcattgc tttgccactg ttgagtcagg catcttccct gccatggctt ttgatcacta 420
 tgtggccatc tgtgacccac tgcatacatc ctgtgtgctc acccatgctg tgggtgggtcg 480
 tttggggctg gctgcccctc tccggggggg aatctacatt ggacctctgc ccctagtgat 540
 ttgtctgagg ttgccccttt accacaccca aatcattgcc cattcgtact gtgagcacat 600
 ggctgtgtgc accttggcat gtggtgtgac atttattgaa gtgttgatc tattctttat 660
 catcctatct tatatcttta tcccttcagg cagttctaca actctcctct cagaggcccg 720
 ctacaaagca tttgggacat gtgtctctca cataggtgcc atcttagcct tctacacacc 780
 ttcagtcac tcttcagtca tgcaccgtgt ggcccgtgt gctgcgccac acgtccacat 840
 tctcctcgcc aatttctatc tgcctctccc acccatggtc aatcccatca tctacggcgt 900
 taagaccaag cagatccgtg acagtcttgg gagtattccc gagaaaggat gtgtgaatag 960
 agagtgagga ataagtggaa 980

<210> 24
 <211> 306
 <212> PRT
 <213> Homo sapiens

<400> 24
 Met Leu Thr Pro Asn Asn Ala Cys Ser Val Pro Thr Ser Phe Arg Leu
 1 5 10 15

Thr Gly Ile Pro Gly Leu Glu Ser Leu His Ile Trp Leu Ser Ile Pro

20					25					30					
Phe	Gly	Ser	Met	Tyr	Leu	Val	Ala	Val	Leu	Gly	Asn	Ile	Thr	Ile	Leu
		35					40					45			
Ala	Val	Val	Arg	Met	Glu	Tyr	Ser	Leu	His	Gln	Pro	Met	Tyr	Phe	Phe
	50					55					60				
Leu	Cys	Met	Leu	Ala	Val	Ile	Asp	Leu	Val	Leu	Ser	Thr	Ser	Thr	Met
65					70					75					80
Pro	Lys	Leu	Leu	Ala	Ile	Phe	Trp	Phe	Gly	Ala	His	Asn	Ile	Gly	Val
				85					90					95	
Asn	Ala	Cys	Leu	Ala	Gln	Met	Phe	Phe	Ile	His	Cys	Phe	Ala	Thr	Val
			100					105					110		
Glu	Ser	Gly	Ile	Phe	Leu	Ala	Met	Ala	Phe	Asp	His	Tyr	Val	Ala	Ile
		115					120					125			
Cys	Asp	Pro	Leu	His	His	Thr	Leu	Leu	Leu	Thr	His	Ala	Val	Val	Gly
	130					135					140				
Arg	Leu	Gly	Leu	Ala	Ala	Leu	Leu	Arg	Gly	Val	Ile	Tyr	Ile	Gly	Pro
145					150					155					160
Leu	Pro	Leu	Val	Ile	Cys	Leu	Arg	Leu	Pro	Leu	Tyr	His	Thr	Gln	Ile
			165						170					175	
Ile	Ala	His	Ser	Tyr	Cys	Glu	His	Met	Ala	Val	Val	Thr	Leu	Ala	Cys
			180					185					190		
Gly	Val	Thr	Phe	Ile	Glu	Val	Leu	Asp	Leu	Phe	Phe	Ile	Ile	Leu	Ser
		195					200					205			
Tyr	Ile	Phe	Ile	Pro	Ser	Gly	Ser	Ser	Thr	Thr	Leu	Leu	Ser	Glu	Ala
	210					215					220				
Arg	Tyr	Lys	Ala	Phe	Gly	Thr	Cys	Val	Ser	His	Ile	Gly	Ala	Ile	Leu
225					230					235					240
Ala	Phe	Tyr	Thr	Pro	Ser	Val	Ile	Ser	Ser	Val	Met	His	Arg	Val	Ala
			245						250					255	
Arg	Cys	Ala	Ala	Pro	His	Val	His	Ile	Leu	Leu	Ala	Asn	Phe	Tyr	Leu
			260					265					270		
Leu	Phe	Pro	Pro	Met	Val	Asn	Pro	Ile	Ile	Tyr	Gly	Val	Lys	Thr	Lys
		275					280					285			
Gln	Ile	Arg	Asp	Ser	Leu	Gly	Ser	Ile	Pro	Glu	Lys	Gly	Cys	Val	Asn
	290					295					300				
Arg	Glu														
305															

<210> 25
 <211> 980
 <212> DNA
 <213> Homo sapiens

<400> 25
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 catatacact ggccctgctt ggaaactgca ctctccttct catcatccag gctgatgcag 180
 ccctccatga acccatgtac ctctttctgg ccatgttggc agccatcgac ctggctccttt 240
 cctcctcagc actgccc aaa atgcttgcca tattctgggt cagggatcgg gagataaaact 300
 tctttgcctg tctggcccag atgttcttcc ttactcctt ctccatcatg gagtcagcag 360
 tgctgctggc catggccttt gaccgctatg tggctatctg caagccactg cactacacca 420
 aggtcctgac tgggtccctc atcaccaaga ttggcatggc tgctgtggcc cgggctgtga 480
 cactaatgac tccactcccc ttctgtctga gatgtttcca ctactgccga ggcccagtga 540
 tcgctcactg ctactgtgaa cacatggctg tggtgaggct ggctgtggg gacactagct 600
 tcaacaatat ctatggcatc gctgtggcca tgtttattgt ggtgttggac ctgctccttg 660
 ttatcctgtc ttatatcttt attcttcagg cagttctact gcttgccctc caggaggccc 720
 gctacaaggc atttgggaca tgtgtctctc atataggtgc catcttagcc ttctacacaa 780
 ctgtggtcat ctcttcagtc atgcaccgtg tagcccgcca tgctgcccct catgtccaca 840
 tctccttgc caatttctat ctgctcttcc caccatgggt caatcccata atctatgggtg 900
 tcaagaccaa gcaaatccgt gagagcatct tgggagtatt cccaagaaag gatatgtaga 960
 ggggtgaggtg gagaaagaat 980

<210> 26
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 26
 Met Ser Ala Ser Asn Ile Thr Leu Thr His Pro Thr Ala Phe Leu Leu
 1 5 10 15
 Val Gly Ile Pro Gly Leu Glu His Leu His Ile Trp Ile Ser Ile Pro
 20 25 30
 Phe Cys Leu Ala Tyr Thr Leu Ala Leu Leu Gly Asn Cys Thr Leu Leu
 35 40 45
 Leu Ile Ile Gln Ala Asp Ala Ala Leu His Glu Pro Met Tyr Leu Phe
 50 55 60
 Leu Ala Met Leu Ala Ala Ile Asp Leu Val Leu Ser Ser Ser Ala Leu
 65 70 75 80
 Pro Lys Met Leu Ala Ile Phe Trp Phe Arg Asp Arg Glu Ile Asn Phe
 85 90 95
 Phe Ala Cys Leu Ala Gln Met Phe Phe Leu His Ser Phe Ser Ile Met
 100 105 110
 Glu Ser Ala Val Leu Leu Ala Met Ala Phe Asp Arg Tyr Val Ala Ile
 115 120 125
 Cys Lys Pro Leu His Tyr Thr Lys Val Leu Thr Gly Ser Leu Ile Thr
 130 135 140

Lys Ile Gly Met Ala Ala Val Ala Arg Ala Val Thr Leu Met Thr Pro
 145 150 155 160
 Leu Pro Phe Leu Leu Arg Cys Phe His Tyr Cys Arg Gly Pro Val Ile
 165 170 175
 Ala His Cys Tyr Cys Glu His Met Ala Val Val Arg Leu Ala Cys Gly
 180 185 190
 Asp Thr Ser Phe Asn Asn Ile Tyr Gly Ile Ala Val Ala Met Phe Ile
 195 200 205
 Val Val Leu Asp Leu Leu Leu Val Ile Leu Ser Tyr Ile Phe Ile Leu
 210 215 220
 Gln Ala Val Leu Leu Leu Ala Ser Gln Glu Ala Arg Tyr Lys Ala Phe
 225 230 235 240
 Gly Thr Cys Val Ser His Ile Gly Ala Ile Leu Ala Phe Tyr Thr Thr
 245 250 255
 Val Val Ile Ser Ser Val Met His Arg Val Ala Arg His Ala Ala Pro
 260 265 270
 His Val His Ile Leu Leu Ala Asn Phe Tyr Leu Leu Phe Pro Pro Met
 275 280 285
 Val Asn Pro Ile Ile Tyr Gly Val Lys Thr Lys Gln Ile Arg Glu Ser
 290 295 300
 Ile Leu Gly Val Phe Pro Arg Lys Asp Met
 305 310

<210> 27

<211> 980

<212> DNA

<213> Homo sapiens

<400> 27

ctaaaactaa gagctcctgt ctcttgata cccagatcc ctgaatatgt taaccacctaa 60
 taatgcctgc tccgtgccta cctctttccg gctcactggc atccctggcc tggaatccct 120
 gcacatctgg ctctccatcc cctttggctc catgtacctg gtagctgtgc tggggaacat 180
 aaccatcctg gcagtggtaa ggatggagta cagcctgcat cagcccatgt acttcttctt 240
 gtgcatgttg gctgtcattg acttggtcct gtcaacctct accatgccca aactactggc 300
 catcttctgg tttggtgccc acaacattgg tgtaaatgcc tgtttggccc agatgttctt 360
 cattcattgc tttgccactg ttgagtcagg catcttcctt gccatggctt ttgatcacta 420
 tgtggccatc tgtgaccac tgcatacatc cttgttgctc acccatgctg tgggtgggtcg 480
 tttggggctg gctgcccctc tccggggggg aatctacatt ggacctctgc ccctagtgat 540
 ttgtctgagg ttgccccttt accacaccca aatcattgcc cattcgtact gtgagcacat 600
 ggctgtggtc accttggcat gtggtgtgac atttattgaa gtgttggatc tattctttat 660
 catcctatct tatactctta tcccttcagg cagttctaca actctcctct cagaggcccc 720
 ctacaaagca tttgggacat gtgtctctca cataggtgcc atcttagcct tctacacacc 780
 ttcagtcate tcttcagtca tgcaccgtgt ggcccgtgt gctgcgccac acgtccacat 840
 tctcctcgcc aatttctatc tgctcttccc acccatggtc aatcccatca tctacggcgt 900
 taagaccaag cagatccgtg acagtcttgg gagtattccc gagaaaggat gtgtgaatag 960

<210> 28

<211> 275

<212> PRT

<213> Homo sapiens

<400> 28

Met Cys Phe Phe Leu Ser Asn Leu Cys Trp Ala Asp Ile Gly Phe Thr
 1 5 10 15

Ser Ala Met Val Pro Lys Met Ile Val Asp Met Gln Ser His Ser Arg
 20 25 30

Val Ile Ser Tyr Ala Gly Cys Leu Thr Gln Met Ser Phe Phe Val Leu
 35 40 45

Phe Ala Cys Ile Glu Asp Met Leu Leu Thr Val Met Ala Tyr Asp Arg
 50 55 60

Phe Val Ala Ile Cys His Pro Leu His Tyr Pro Val Ile Met Asn Pro
 65 70 75 80

His Leu Gly Val Phe Leu Val Leu Val Ser Phe Phe Leu Ser Leu Leu
 85 90 95

Asp Ser Gln Leu His Ser Trp Ile Val Leu Gln Phe Thr Phe Phe Lys
 100 105 110

Asn Val Glu Ile Ser Asn Phe Val Cys Asp Pro Ser Gln Leu Leu Asn
 115 120 125

Leu Ala Cys Ser Asp Ser Val Ile Asn Ser Ile Phe Ile Tyr Leu Asp
 130 135 140

Ser Ile Met Phe Gly Phe Leu Pro Ile Ser Gly Ile Leu Leu Ser Tyr
 145 150 155 160

Ala Asn Asn Val Pro Ser Ile Leu Arg Ile Ser Ser Ser Asp Arg Lys
 165 170 175

Ser Lys Ala Phe Ser Thr Cys Gly Ser His Leu Ala Val Val Cys Leu
 180 185 190

Phe Tyr Gly Thr Gly Ile Gly Val Tyr Leu Thr Ser Ala Val Ser Pro
 195 200 205

Pro Pro Arg Asn Gly Val Val Ala Ser Val Met Tyr Ala Val Val Thr
 210 215 220

Pro Met Leu Asn Pro Phe Ile Tyr Ser Leu Arg Asn Arg Asp Ile Gln
 225 230 235 240

Ser Ala Leu Trp Arg Leu Arg Ser Arg Thr Val Glu Ser His Asp Leu
 245 250 255

Leu Ser Gln Asp Leu Leu His Pro Phe Ser Cys Val Gly Glu Lys Gly
 260 265 270

Gln Pro His
 275

<210> 29
 <211> 840
 <212> DNA
 <213> Homo sapiens

<400> 29
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 tcttggtaaa gaggaacc atttctttt atgggtgtat gacacagata attgtctttc 180
 ttctggttg gtgtacagag tgtgcgctgc tggcagtgt gtcctatgac cgggtatgtg 240
 ctgtctgcaa gcccctgtac tactctacca tcatgacaca acgggtgtgt ctctggctgt 300
 ccttcagggtc ctgggccagt ggggcactag tgtctttagt agataccagc tttactttcc 360
 atcttccta ctggggacag aatataatca atcactactt ttgtgaacct cctgccctcc 420
 tgaagctggc ttccatagac acttacagca cagaaatggc catcttttca atgggcgtgg 480
 taatcctcct ggcccctgtc tccctgattc ttggttctta ttggaatatt atctccactg 540
 ttatccagat gcagctctggg gaaggagac tcaaggcttt ttccacctgt ggctcccatc 600
 ttattgttgt tgtcctcttc tatgggtcag gaatattcac ctacatgcga ccaaactcca 660
 agactacaaa agaactggat aaaatgatat ctgtgttcta tacagcgggtg actccaatgt 720
 tgaaccccat aatttatagc ttgaggaaca aagatgtcaa aggggtctc aggaaactag 780
 ttgggagaaa gtgcttctct cataggcagt gacctctgag tctgactttt agagctatgg 840

<210> 30
 <211> 256
 <212> PRT
 <213> Homo sapiens

<400> 30
 Met Tyr Phe Phe Leu Arg Asn Leu Ser Phe Ala Asp Leu Cys Phe Ser
 1 5 10 15
 Thr Ser Ile Val Pro Gln Val Leu Val His Phe Leu Val Lys Arg Lys
 20 25 30
 Thr Ile Ser Phe Tyr Gly Cys Met Thr Gln Ile Ile Val Phe Leu Leu
 35 40 45
 Val Gly Cys Thr Glu Cys Ala Leu Leu Ala Val Met Ser Tyr Asp Arg
 50 55 60
 Tyr Val Ala Val Cys Lys Pro Leu Tyr Tyr Ser Thr Ile Met Thr Gln
 65 70 75 80
 Arg Val Cys Leu Trp Leu Ser Phe Arg Ser Trp Ala Ser Gly Ala Leu
 85 90 95
 Val Ser Leu Val Asp Thr Ser Phe Thr Phe His Leu Pro Tyr Trp Gly
 100 105 110
 Gln Asn Ile Ile Asn His Tyr Phe Cys Glu Pro Pro Ala Leu Leu Lys

115		120		125
Leu Ala Ser Ile Asp Thr Tyr Ser Thr Glu Met Ala Ile Phe Ser Met				
130		135		140
Gly Val Val Ile Leu Leu Ala Pro Val Ser Leu Ile Leu Gly Ser Tyr				
145		150		155
Trp Asn Ile Ile Ser Thr Val Ile Gln Met Gln Ser Gly Glu Gly Arg				
		165		170
				175
Leu Lys Ala Phe Ser Thr Cys Gly Ser His Leu Ile Val Val Val Leu				
		180		185
				190
Phe Tyr Gly Ser Gly Ile Phe Thr Tyr Met Arg Pro Asn Ser Lys Thr				
		195		200
				205
Thr Lys Glu Leu Asp Lys Met Ile Ser Val Phe Tyr Thr Ala Val Thr				
		210		215
				220
Pro Met Leu Asn Pro Ile Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys				
		225		230
				235
Gly Ala Leu Arg Lys Leu Val Gly Arg Lys Cys Phe Ser His Arg Gln				
		245		250
				255

<210> 31
 <211> 993
 <212> DNA
 <213> Homo sapiens

<400> 31
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 agtttatctt cctgggtctt tcacaggact tgcagacca gatcctgcta tttatccttt 120
 tcctcatcat ttatctgctg accgtgcttg gaaaccagct catcatcatt ctcatcttcc 180
 tggattctcg ccttcacact cccatgtatt tttttcttag aaatctctcc tttgcagatc 240
 tctgtttctc tactagcatt gtccctcaag tgttggttca cttcttggtg aagaggaaaa 300
 ccatttcttt ttatgggtgt atgacacaga taattgtctt tcttctgggt ggggtgtacag 360
 agtgtgcgct gctggccgtg atgtcctatg accggtatgt ggctgtctgc aagccccgtg 420
 actactctac catcatgaca caacgggtgt gtctctgggt gtccttcagg tcctgggcca 480
 gtggggcact agtgtcttta gtagatacca gctttacttt ccatcttccc tactggggac 540
 agaataaat caatcactac ttttgtgaac ctctgccc cctgaagctg gcttccatag 600
 acacttacag cacagaaatg gccatctttt caatgggctg ggtaatcctc ctggccccctg 660
 tctccctgat tcttggttct tattggaata ttatctccac tggtatccag atgcagtctg 720
 gggaaggag actcaaggct ttttccacct gtggctccca tcttattggt gttgtcctct 780
 tctatgggtc aggaatatcc acctacatgc gaccaaactc caagactaca aaagaactgg 840
 ataaaatgat atctgtgttc tatacagcgg tgactccaat gttgaacccc ataatttata 900
 gcttgaggaa caaagatgtc aaaggggctc tcaggaaact agttgggaga aagtgttctt 960
 ctcataggca gtgacctctg agtctgactt tta 993

<210> 32
 <211> 314

<212> PRT

<213> Homo sapiens

<400> 32

Met	Gly	Glu	Glu	Asn	Gln	Thr	Phe	Val	Ser	Lys	Phe	Ile	Phe	Leu	Gly	
1				5					10					15		
Leu	Ser	Gln	Asp	Leu	Gln	Thr	Gln	Ile	Leu	Leu	Phe	Ile	Leu	Phe	Leu	
		20						25					30			
Ile	Ile	Tyr	Leu	Leu	Thr	Val	Leu	Gly	Asn	Gln	Leu	Ile	Ile	Ile	Leu	
		35					40					45				
Ile	Phe	Leu	Asp	Ser	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Phe	Leu	Arg	
	50					55					60					
Asn	Leu	Ser	Phe	Ala	Asp	Leu	Cys	Phe	Ser	Thr	Ser	Ile	Val	Pro	Gln	
65					70					75					80	
Val	Leu	Val	His	Phe	Leu	Val	Lys	Arg	Lys	Thr	Ile	Ser	Phe	Tyr	Gly	
			85						90						95	
Cys	Met	Thr	Gln	Ile	Ile	Val	Phe	Leu	Leu	Val	Gly	Cys	Thr	Glu	Cys	
			100					105					110			
Ala	Leu	Leu	Ala	Val	Met	Ser	Tyr	Asp	Arg	Tyr	Val	Ala	Val	Cys	Lys	
	115						120					125				
Pro	Leu	Tyr	Tyr	Ser	Thr	Ile	Met	Thr	Gln	Arg	Val	Cys	Leu	Trp	Leu	
	130					135					140					
Ser	Phe	Arg	Ser	Trp	Ala	Ser	Gly	Ala	Leu	Val	Ser	Leu	Val	Asp	Thr	
145				150					155					160		
Ser	Phe	Thr	Phe	His	Leu	Pro	Tyr	Trp	Gly	Gln	Asn	Ile	Ile	Asn	His	
			165						170					175		
Tyr	Phe	Cys	Glu	Pro	Pro	Ala	Leu	Leu	Lys	Leu	Ala	Ser	Ile	Asp	Thr	
		180					185						190			
Tyr	Ser	Thr	Glu	Met	Ala	Ile	Phe	Ser	Met	Gly	Val	Val	Ile	Leu	Leu	
	195					200						205				
Ala	Pro	Val	Ser	Leu	Ile	Leu	Gly	Ser	Tyr	Trp	Asn	Ile	Ile	Ser	Thr	
	210					215					220					
Val	Ile	Gln	Met	Gln	Ser	Gly	Glu	Gly	Arg	Leu	Lys	Ala	Phe	Ser	Thr	
225				230						235					240	
Cys	Gly	Ser	His	Leu	Ile	Val	Val	Val	Leu	Phe	Tyr	Gly	Ser	Gly	Ile	
			245						250					255		
Phe	Thr	Tyr	Met	Arg	Pro	Asn	Ser	Lys	Thr	Thr	Lys	Glu	Leu	Asp	Lys	
		260						265					270			
Met	Ile	Ser	Val	Phe	Tyr	Thr	Ala	Val	Thr	Pro	Met	Leu	Asn	Pro	Ile	
	275						280					285				

Ile Tyr Ser Leu Arg Asn Lys Asp Val Lys Gly Ala Leu Arg Lys Leu
 290 295 300

Val Gly Arg Lys Cys Phe Ser His Arg Gln
 305 310

<210> 33
 <211> 1003
 <212> DNA
 <213> Homo sapiens

<400> 33
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 gtgaccatgt tcatcctcct gggattcaca gaccatccag aactccaggc cctcctcttt 120
 gtgaccttcc tgggcatcta tcttaccacc ctggcctgga acctggccct catttttctg 180
 atcagagggtg acacccatct gcacacaccc atgtacttct tcctaagcaa cttatctttc 240
 attgacatct gctactcttc tgctgtggct cccaatatgc tctactgactt cttctgggag 300
 cagaagacca tatcatttgt gggctgtgct gctcagtttt ttttctttgt cggcatgggt 360
 ctgtctgagt gcctcctcct gactgctatg gcatacgacc gatatgcagc catctccagc 420
 ccccttctct accccactat catgacccag ggccctctgta cacgcatggg ggttggggca 480
 tatgttggtg gcttcctgag ctccctgata caggccagct ccatatttag gcttcacttt 540
 tgcggaccca acatcatcaa ccacttcttc tgcgacctcc caccagtcct ggctctgtct 600
 tgctctgaca ccttcctcag tcaagtgggtg aatttcctcg tgggtggcac tgtcggagga 660
 acatcgttcc tccaactcct tatctcctat ggttacatag tgtctgcggt cctgaagatc 720
 ccttcagcag agggccgatg gaaagcctgc aacacgtgtg cctcgcactt gatgggtggg 780
 actctgtctg ttgggacagc ccttttctgt tacttgcgac ccagctccag ctacttgcta 840
 ggcagggaca aggtgggtgtc tgttttctat tcattgggtga tccccatgct gaacctctc 900
 atttacagtt tgaggaacaa agagatcaag gatgccctgt ggaaggtgtt ggaaaggaag 960
 aaagtgtttt cttaggtcat gcgtagaaac ttatttatcc aaa 1003

<210> 34
 <211> 315
 <212> PRT
 <213> Homo sapiens

<400> 34
 Met Ser Ile Thr Lys Ala Trp Asn Ser Ser Ser Val Thr Met Phe Ile
 1 5 10 15
 Leu Leu Gly Phe Thr Asp His Pro Glu Leu Gln Ala Leu Leu Phe Val
 20 25 30
 Thr Phe Leu Gly Ile Tyr Leu Thr Thr Leu Ala Trp Asn Leu Ala Leu
 35 40 45
 Ile Phe Leu Ile Arg Gly Asp Thr His Leu His Thr Pro Met Tyr Phe
 50 55 60
 Phe Leu Ser Asn Leu Ser Phe Ile Asp Ile Cys Tyr Ser Ser Ala Val
 65 70 75 80
 Ala Pro Asn Met Leu Thr Asp Phe Phe Trp Glu Gln Lys Thr Ile Ser
 85 90 95

Phe Val Gly Cys Ala Ala Gln Phe Phe Phe Phe Val Gly Met Gly Leu
 100 105 110
 Ser Glu Cys Leu Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala
 115 120 125
 Ile Ser Ser Pro Leu Leu Tyr Pro Thr Ile Met Thr Gln Gly Leu Cys
 130 135 140
 Thr Arg Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Leu
 145 150 155 160
 Ile Gln Ala Ser Ser Ile Phe Arg Leu His Phe Cys Gly Pro Asn Ile
 165 170 175
 Ile Asn His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys
 180 185 190
 Ser Asp Thr Phe Leu Ser Gln Val Val Asn Phe Leu Val Val Val Thr
 195 200 205
 Val Gly Gly Thr Ser Phe Leu Gln Leu Leu Ile Ser Tyr Gly Tyr Ile
 210 215 220
 Val Ser Ala Val Leu Lys Ile Pro Ser Ala Glu Gly Arg Trp Lys Ala
 225 230 235 240
 Cys Asn Thr Cys Ala Ser His Leu Met Val Val Thr Leu Leu Phe Gly
 245 250 255
 Thr Ala Leu Phe Val Tyr Leu Arg Pro Ser Ser Ser Tyr Leu Leu Gly
 260 265 270
 Arg Asp Lys Val Val Ser Val Phe Tyr Ser Leu Val Ile Pro Met Leu
 275 280 285
 Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu
 290 295 300
 Trp Lys Val Leu Glu Arg Lys Lys Val Phe Ser
 305 310 315

<210> 35

<211> 956

<212> DNA

<213> Homo sapiens

<400> 35

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 taccaccctg gcctggaacc tggccctcat ttttctggtc agaggtgaca cccatctgca 180
 cacacccatg tacttcttcc taagcaactt atctttcatt gacatctgct actcttctgc 240
 tgtggctccc aatatgctca ctgacttctt ctgggagcag aagaccatat catttgtggg 300
 ctgtgctgct cagttttttt tctttgtcgg catgggtctg tctgagtgcc tcctcctgac 360
 tgctatggca tacgaccgat atgcagccat ctccagcccc cttctctacc ccactatcat 420
 gaccaggggc ctctgtacac gcatgggtggg tggggcatat gttggtggct tcctgagctc 480

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cctgatccag gccagctcca tatttaggct tcacttttgc ggacccaaca tcatcaacca 540
cttcttctgc gacctccac cagtcctggc tctgtcttgc tctgacacct tcctcagtca 600
agtggatgaat ttccctcgtgg tggtcactgt cggaggaaca tcgttcctcc aactccttat 660
ctcctatggt tacatagtgt ctgcggtcct gaagatccct tcagcagagg gccgatggaa 720
agcctgcaac acgtgtgcct cgcactctgat ggtggtgact ctgctgtttg ggacagccct 780
tttcgtgtac ttgcgaccca gctccagcta cttgctaggc agggacaaaag tgggtgtctgt 840
tttctattca ttggtgatcc ccatgctgaa ccctctcatt tacagtttga ggaacaaaga 900
gatcaaggat gccctgtgga aggtgttggga aaggaagaaa gtgttttctt aggtca 956

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<210> 36
<211> 315
<212> PRT
<213> Homo sapiens

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<400> 36
Met Ser Ile Thr Lys Ala Trp Asn Ser Ser Ser Val Thr Met Phe Ile
  1              5              10              15

Leu Leu Gly Phe Thr Asp His Pro Glu Leu Gln Ala Leu Leu Phe Val
      20              25              30

Thr Phe Leu Gly Ile Tyr Leu Thr Thr Leu Ala Trp Asn Leu Ala Leu
  35              40              45

Ile Phe Leu Val Arg Gly Asp Thr His Leu His Thr Pro Met Tyr Phe
  50              55              60

Phe Leu Ser Asn Leu Ser Phe Ile Asp Ile Cys Tyr Ser Ser Ala Val
  65              70              75              80

Ala Pro Asn Met Leu Thr Asp Phe Phe Trp Glu Gln Lys Thr Ile Ser
      85              90              95

Phe Val Gly Cys Ala Ala Gln Phe Phe Phe Phe Val Gly Met Gly Leu
  100              105              110

Ser Glu Cys Leu Leu Leu Thr Ala Met Ala Tyr Asp Arg Tyr Ala Ala
  115              120              125

Ile Ser Ser Pro Leu Leu Tyr Pro Thr Ile Met Thr Gln Gly Leu Cys
  130              135              140

Thr Arg Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Leu
  145              150              155              160

Ile Gln Ala Ser Ser Ile Phe Arg Leu His Phe Cys Gly Pro Asn Ile
      165              170              175

Ile Asn His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys
  180              185              190

Ser Asp Thr Phe Leu Ser Gln Val Val Asn Phe Leu Val Val Val Thr
  195              200              205

Val Gly Gly Thr Ser Phe Leu Gln Leu Leu Ile Ser Tyr Gly Tyr Ile
  210              215              220

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Val Ser Ala Val Leu Lys Ile Pro Ser Ala Glu Gly Arg Trp Lys Ala
225 230 235 240

Cys Asn Thr Cys Ala Ser His Leu Met Val Val Thr Leu Leu Phe Gly
245 250 255

Thr Ala Leu Phe Val Tyr Leu Arg Pro Ser Ser Ser Tyr Leu Leu Gly
260 265 270

Arg Asp Lys Val Val Ser Val Phe Tyr Ser Leu Val Ile Pro Met Leu
275 280 285

Asn Pro Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile Lys Asp Ala Leu
290 295 300

Trp Lys Val Leu Glu Arg Lys Lys Val Phe Ser
305 310 315

<210> 37

<211> 1050

<212> DNA

<213> Homo sapiens

<400> 37

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agatgaaaaa gagctgcagc tcatcctctt tccagtcttc ctggtgatct accttgtgac 180
cctgatttgg aacatgggtc ttatcatcct catcagaata gactctcatc tgaacacacc 240
catgtacttt tttctcagtt tcctctcatt tacagacatc tgctattctt ctaccatcag 300
cccaaggatg ctttcagact tcttaaaaga taagaagaca atttccttcc ttgcctgtgc 360
cactcagtat tttottgggg cctggatgag tctggctgag tgctgcctct tggatcatcat 420
ggcctgtgac agatatgtgg ccattggcag cccctgcag tactcagcaa tcatgggtccc 480
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tcatacagtc ccttgcttta atctctacta ctgtgggcca aatatcattc aacatttctt 600
ctgtaacaca cttcagatta ttctcttgtc ttgctccaac ccctttatca gccaaatgat 660
tctttttctg gaagctattt ttgttgggtt gggctccttg cttgttatcc ttttgtctta 720
tggttttcatt gttagcttcca tactgaaaat atcatcaacc aaatgttggtg ccaaggcctt 780
caatacctgt gcctcccacc tggcagctgt ggctctcttc tatggcacag ccctttctgt 840
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tggtatactt atccccatgt taaacactct gatctatagt ttgaggaaca aggaaatcaa 960
agaggccctc aagagggtga caaatggagc aacatattta cattagtaag aacaacattt 1020
gggtagatat tgttatttct ataacgaaga 1050
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<210> 38

<211> 319

<212> PRT

<213> Homo sapiens

<400> 38

Met Ala Pro Ser Arg Ser Met Glu Val Ser Gly Asn His Thr Ser Val
1 5 10 15

Ala Met Phe Val Leu Leu Gly Leu Ser Asp Glu Lys Glu Leu Gln Leu
20 25 30

Ile Leu Phe Pro Val Phe Leu Val Ile Tyr Leu Val Thr Leu Ile Trp
 35 40 45
 Asn Met Gly Leu Ile Ile Leu Ile Arg Ile Asp Ser His Leu Asn Thr
 50 55 60
 Pro Met Tyr Phe Phe Leu Ser Phe Leu Ser Phe Thr Asp Ile Cys Tyr
 65 70 75 80
 Ser Ser Thr Ile Ser Pro Arg Met Leu Ser Asp Phe Leu Lys Asp Lys
 85 90 95
 Lys Thr Ile Ser Phe Leu Ala Cys Ala Thr Gln Tyr Phe Leu Gly Ala
 100 105 110
 Trp Met Ser Leu Ala Glu Cys Cys Leu Leu Val Ile Met Ala Cys Asp
 115 120 125
 Arg Tyr Val Ala Ile Gly Ser Pro Leu Gln Tyr Ser Ala Ile Met Val
 130 135 140
 Pro Ser Ile Cys Trp Lys Met Val Ala Gly Val Cys Gly Gly Gly Phe
 145 150 155 160
 Leu Ser Ser Leu Val His Thr Val Pro Cys Phe Asn Leu Tyr Tyr Cys
 165 170 175
 Gly Pro Asn Ile Ile Gln His Phe Phe Cys Asn Thr Leu Gln Ile Ile
 180 185 190
 Ser Leu Ser Cys Ser Asn Pro Phe Ile Ser Gln Met Ile Leu Phe Leu
 195 200 205
 Glu Ala Ile Phe Val Gly Leu Gly Ser Leu Leu Val Ile Leu Leu Ser
 210 215 220
 Tyr Gly Phe Ile Val Ala Ser Ile Leu Lys Ile Ser Ser Thr Lys Cys
 225 230 235 240
 Cys Ala Lys Ala Phe Asn Thr Cys Ala Ser His Leu Ala Ala Val Ala
 245 250 255
 Leu Phe Tyr Gly Thr Ala Leu Ser Val Tyr Met His Pro Ser Ser Ser
 260 265 270
 His Ser Met Lys Glu Asp Lys Val Leu Ser Val Phe Tyr Val Ile Leu
 275 280 285
 Ile Pro Met Leu Asn Thr Leu Ile Tyr Ser Leu Arg Asn Lys Glu Ile
 290 295 300
 Lys Glu Ala Leu Lys Arg Val Thr Asn Gly Ala Thr Tyr Leu His
 305 310 315

<210> 39

<211> 1050
 <212> DNA
 <213> Homo sapiens

<400> 39
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 acaaaaattca ttctcctggg actttcagac catcctcaaa tgaagatttt ccttttcatg 120
 ttattttctgg ggctctacct cctgacgttg gcctggaact taagcctcat tgccctcatt 180
 aagatggact ctcacctgca catgcccatt tacttcttcc tcagtaacct gtccttcctg 240
 gacatctgct atgtgtcctc caccgcccct aagatgctgt ctgacatcat cacagagcag 300
 aaaaccattt cctttgttgg ctgtgccact cagtactttg tcttctgtgg gatggggctg 360
 actgaatgct ttctcctggc agctatggcc tatgaccggt atgctgcaat ctgcaacccc 420
 ttgctttaca cagtcctcat atcccatata ctttgtttaa agatgggtgg tggcgccat 480
 gtgggtggat tccttagttc ttccattgaa acatactctg tctatcagca tgatttctgt 540
 gggccctata tgatcaacca ctttttctgt gacctccctc cagtcctggc tctgtcctgc 600
 tctgatacct tcaccagcga ggtggtgacc ttcatagtca gtgttgtcgt tgggaatagt 660
 tctgtgctag tggtcctcat ctcttatggt tacattgttg ctgctgttgt gaagatcagc 720
 tcagctacag gtaggacaaa ggccttcagc acttgtgcct ctcacctgac tgctgtgacc 780
 ctcttctatg gttctggatt ctccatgtac atgcgaccca gttccagcta ctccctaaac 840
 agggacaagg tgggtgccat attctatgcc ttggtgatcc ccgtggtgaa tcccatcatc 900
 tacagtttta ggaataagga gattaaaaat gccatgagga aagccatgga aagggacccc 960
 gggatttctc acggtggacc attcattttt atgaccttgg gctaattgtt acaatgaagc 1020
 tgtgagctag gtgaattgtg cagacattta 1050

<210> 40
 <211> 324
 <212> PRT
 <213> Homo sapiens

<400> 40
 Met Ala Val Gly Arg Asn Asn Thr Ile Val Thr Lys Phe Ile Leu Leu
 1 5 10 15
 Gly Leu Ser Asp His Pro Gln Met Lys Ile Phe Leu Phe Met Leu Phe
 20 25 30
 Leu Gly Leu Tyr Leu Leu Thr Leu Ala Trp Asn Leu Ser Leu Ile Ala
 35 40 45
 Leu Ile Lys Met Asp Ser His Leu His Met Pro Met Tyr Phe Phe Leu
 50 55 60
 Ser Asn Leu Ser Phe Leu Asp Ile Cys Tyr Val Ser Ser Thr Ala Pro
 65 70 75 80
 Lys Met Leu Ser Asp Ile Ile Thr Glu Gln Lys Thr Ile Ser Phe Val
 85 90 95
 Gly Cys Ala Thr Gln Tyr Phe Val Phe Cys Gly Met Gly Leu Thr Glu
 100 105 110
 Cys Phe Leu Leu Ala Ala Met Ala Tyr Asp Arg Tyr Ala Ala Ile Cys
 115 120 125
 Asn Pro Leu Leu Tyr Thr Val Leu Ile Ser His Thr Leu Cys Leu Lys
 130 135 140

Met Val Val Gly Ala Tyr Val Gly Gly Phe Leu Ser Ser Phe Ile Glu
 145 150 155 160
 Thr Tyr Ser Val Tyr Gln His Asp Phe Cys Gly Pro Tyr Met Ile Asn
 165 170 175
 His Phe Phe Cys Asp Leu Pro Pro Val Leu Ala Leu Ser Cys Ser Asp
 180 185 190
 Thr Phe Thr Ser Glu Val Val Thr Phe Ile Val Ser Val Val Val Gly
 195 200 205
 Ile Val Ser Val Leu Val Val Leu Ile Ser Tyr Gly Tyr Ile Val Ala
 210 215 220
 Ala Val Val Lys Ile Ser Ser Ala Thr Gly Arg Thr Lys Ala Phe Ser
 225 230 235 240
 Thr Cys Ala Ser His Leu Thr Ala Val Thr Leu Phe Tyr Gly Ser Gly
 245 250 255
 Phe Phe Met Tyr Met Arg Pro Ser Ser Ser Tyr Ser Leu Asn Arg Asp
 260 265 270
 Lys Val Val Ser Ile Phe Tyr Ala Leu Val Ile Pro Val Val Asn Pro
 275 280 285
 Ile Ile Tyr Ser Phe Arg Asn Lys Glu Ile Lys Asn Ala Met Arg Lys
 290 295 300
 Ala Met Glu Arg Asp Pro Gly Ile Ser His Gly Gly Pro Phe Ile Phe
 305 310 315 320
 Met Thr Leu Gly

<210> 41
 <211> 980
 <212> DNA
 <213> Homo sapiens

<400> 41
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 tgaccagaa tcgggaagtg agcttagtct tatttctttt cctactcttg gtgtatgtga 120
 caactttgct gggaaacctc ctcacatgag tcaactgtac ctgtgaatct cgccttcaca 180
 cgcccatgta ttttttgctc cataatttat ctattgccga tatctgcttc tcttccatca 240
 cagtgcccaa ggttctggtg gaccttctgt ctgaaagaaa gaccatctcc ttcaatcatt 300
 gcttcaactca gatgtttcta ttccacctta ttggaggggt ggatgtattt tctctttcgg 360
 tgatggcatt ggatcgatat gtggccatct ccaagccctt gcactatgcg actatcatga 420
 gtagagacca ttgcattggg ctcacagtgg ctgcctgggt ggggggcttt gtccactcca 480
 tcgtgcagat ttccctgttg ctccactcc ctttctgcgg acccaatgtt cttgacactt 540
 tctactgtga tgtccaccgg gtcctcaaac tggcccatat agacattttc atacttgaac 600
 tactaatgat ttccaacaat ggactgctca ccacactgtg gtttttctctg ctctgtgtgt 660
 cctacatagt catattatca ttacccaagt ctgagcagg agagggcagg aggaaagcca 720
 tctccacctg cacctccac atcactgtgg tgaccctgca tttcgtgccc tgcatttatg 780

tctatgcccg gcccttcact gccctcccca tggataaggc catctctgtc accttcactg 840
 tcattctccc tctgctcaac cccttgatct acactctgag gaaccatgag atgaagtcag 900
 ccatgaggag actgaagaga agacttggtc cttctgatag aaaatagaaa aaaaaatcct 960
 cagctcttca tcaccaaaga 980

<210> 42
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 42
 Met Glu Met Glu Asn Cys Thr Arg Val Lys Glu Phe Ile Phe Leu Gly
 1 5 10 15
 Leu Thr Gln Asn Arg Glu Val Ser Leu Val Leu Phe Leu Phe Leu Leu
 20 25 30
 Leu Val Tyr Val Thr Thr Leu Leu Gly Asn Leu Leu Ile Met Val Thr
 35 40 45
 Val Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu His
 50 55 60
 Asn Leu Ser Ile Ala Asp Ile Cys Phe Ser Ser Ile Thr Val Pro Lys
 65 70 75 80
 Val Leu Val Asp Leu Leu Ser Glu Arg Lys Thr Ile Ser Phe Asn His
 85 90 95
 Cys Phe Thr Gln Met Phe Leu Phe His Leu Ile Gly Gly Val Asp Val
 100 105 110
 Phe Ser Leu Ser Val Met Ala Leu Asp Arg Tyr Val Ala Ile Ser Lys
 115 120 125
 Pro Leu His Tyr Ala Thr Ile Met Ser Arg Asp His Cys Ile Gly Leu
 130 135 140
 Thr Val Ala Ala Trp Leu Gly Gly Phe Val His Ser Ile Val Gln Ile
 145 150 155 160
 Ser Leu Leu Leu Pro Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Thr
 165 170 175
 Phe Tyr Cys Asp Val His Arg Val Leu Lys Leu Ala His Thr Asp Ile
 180 185 190
 Phe Ile Leu Glu Leu Leu Met Ile Ser Asn Asn Gly Leu Leu Thr Thr
 195 200 205
 Leu Trp Phe Phe Leu Leu Leu Val Ser Tyr Ile Val Ile Leu Ser Leu
 210 215 220
 Pro Lys Ser Gln Ala Gly Glu Gly Arg Arg Lys Ala Ile Ser Thr Cys
 225 230 235 240

Thr Ser His Ile Thr Val Val Thr Leu His Phe Val Pro Cys Ile Tyr
 245 250 255
 Val Tyr Ala Arg Pro Phe Thr Ala Leu Pro Met Asp Lys Ala Ile Ser
 260 265 270
 Val Thr Phe Thr Val Ile Ser Pro Leu Leu Asn Pro Leu Ile Tyr Thr
 275 280 285
 Leu Arg Asn His Glu Met Lys Ser Ala Met Arg Arg Leu Lys Arg Arg
 290 295 300
 Leu Val Pro Ser Asp Arg Lys
 305 310

<210> 43
 <211> 980
 <212> DNA
 <213> Homo sapiens

<400> 43
 gaaagagaaa acatgattca atggagttgg gaaatgtcac cagagtaaaa gaatttatat 60
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 tgtacatgac gactctgctg ggaaacctcc tcatcatggg caccgtgacc tgtgagtctc 180
 gccttcacac ccccatgtac ttctgtctcc gcaatctagc catccttgac atctgcttct 240
 cctccacaac tgctcctaaa gtcttgctgg accttctgtc aaagaaaaag accatatact 300
 atacaagctg catgacacag atatttctct tccacctcct tgggtggggca gacatttttt 360
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 ccatcatgag tagagggcaa tgcactgccc tcatctctgc ctcttgatg gggggctttg 480
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 ttgacacttt ctactgcgat gtccccaggg tccctcaaact cacttgcaact gacacttttg 600
 ctcttgagtt cttgatgatt tccaacaatg gcctgggtcac taccctgtgg tttatcttcc 660
 tgcttggtgc ctacacagtc atcctaata gaagtgaggtc tcaggcagga gggggcagga 720
 ggaaagccat ctccacttgc acctcccaaca tcaactgtgg gaccctgcat tttgtgccct 780
 gcatctatgt ctatgcccgg cccttccactg ccctcccccac agaaaaggcc atctctgtca 840
 ccttcaactgt catctccctt ctgctgaacc ctttgatcta cactctgagg aaccaggaaa 900
 tgaagtcagc catgagaaga ctgaagagaa gactcgtgcc ttctgaaagg gaatagaaaa 960
 caaatccagg ccaggcgagg 980

<210> 44
 <211> 311
 <212> PRT
 <213> Homo sapiens

<400> 44
 Met Glu Leu Gly Asn Val Thr Arg Val Lys Glu Phe Ile Phe Leu Gly
 1 5 10 15
 Leu Thr Gln Ser Gln Asp Gln Ser Leu Val Leu Phe Leu Phe Leu Cys
 20 25 30
 Leu Val Tyr Met Thr Thr Leu Leu Gly Asn Leu Leu Ile Met Val Thr
 35 40 45
 Val Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Arg

50	55	60
Asn Leu Ala Ile Leu Asp Ile Cys Phe Ser Ser Thr Thr Ala Pro Lys 65 70 75 80		
Val Leu Leu Asp Leu Leu Ser Lys Lys Lys Thr Ile Ser Tyr Thr Ser 85 90 95		
Cys Met Thr Gln Ile Phe Leu Phe His Leu Leu Gly Gly Ala Asp Ile 100 105 110		
Phe Ser Leu Ser Val Met Ala Phe Asp Cys Tyr Met Ala Ile Ser Lys 115 120 125		
Pro Leu His Tyr Val Thr Ile Met Ser Arg Gly Gln Cys Thr Ala Leu 130 135 140		
Ile Ser Ala Ser Trp Met Gly Gly Phe Val His Ser Ile Val Gln Ile 145 150 155 160		
Ser Leu Leu Leu Pro Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Thr 165 170 175		
Phe Tyr Cys Asp Val Pro Gln Val Leu Lys Leu Thr Cys Thr Asp Thr 180 185 190		
Phe Ala Leu Glu Phe Leu Met Ile Ser Asn Asn Gly Leu Val Thr Thr 195 200 205		
Leu Trp Phe Ile Phe Leu Leu Val Ser Tyr Thr Val Ile Leu Met Thr 210 215 220		
Leu Arg Ser Gln Ala Gly Gly Gly Arg Arg Lys Ala Ile Ser Thr Cys 225 230 235 240		
Thr Ser His Ile Thr Val Val Thr Leu His Phe Val Pro Cys Ile Tyr 245 250 255		
Val Tyr Ala Arg Pro Phe Thr Ala Leu Pro Thr Glu Lys Ala Ile Ser 260 265 270		
Val Thr Phe Thr Val Ile Ser Pro Leu Leu Asn Pro Leu Ile Tyr Thr 275 280 285		
Leu Arg Asn Gln Glu Met Lys Ser Ala Met Arg Arg Leu Lys Arg Arg 290 295 300		
Leu Val Pro Ser Glu Arg Glu 305 310		

<210> 45
 <211> 1023
 <212> DNA
 <213> Homo sapiens

 <400> 45

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gtttgtggtc ttctttgctg tgtatgtagc aacagtcctg ggaaatgcac tcattgtggg 180
cactattacc tgtgagtcct gcctacacac tcctatgtac tttctcttgc ggaacaaatc 240
agtccctggac atcggttttt catctatcac cgtccccaaag ttcctgggtg atctttttatc 300
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tggtggggca gatatttttt tcctctctgt gatggcctat gacagatacc ttgcaatcgc 420
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ggacacaacc atatccatta ataacacggt cattaccccc atgctgaacc ccatcatcta 900
ttccctgaga aatcaagaga tgaagtcagc catgcagagg ctgcagagga gacttgggcc 960
ttccgagagc agaaaatggg ggtgagcagt cagatggaga gtggaagtct gtctgactta 1020
gtt 1023

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<210> 46
 <211> 314
 <212> PRT
 <213> Homo sapiens

<400> 46
 Met Asp Gln Ile Asn His Thr Asn Val Lys Glu Phe Phe Phe Leu Glu
 1 5 10 15
 Leu Thr Arg Ser Arg Glu Leu Glu Phe Phe Leu Phe Val Val Phe Phe
 20 25 30
 Ala Val Tyr Val Ala Thr Val Leu Gly Asn Ala Leu Ile Val Val Thr
 35 40 45
 Ile Thr Cys Glu Ser Arg Leu His Thr Pro Met Tyr Phe Leu Leu Arg
 50 55 60
 Asn Lys Ser Val Leu Asp Ile Val Phe Ser Ser Ile Thr Val Pro Lys
 65 70 75 80
 Phe Leu Val Asp Leu Leu Ser Asp Arg Lys Thr Ile Ser Tyr Asn Asp
 85 90 95
 Cys Met Ala Gln Ile Phe Phe Phe His Phe Ala Gly Gly Ala Asp Ile
 100 105 110
 Phe Phe Leu Ser Val Met Ala Tyr Asp Arg Tyr Leu Ala Ile Ala Lys
 115 120 125
 Pro Leu His Tyr Val Thr Met Met Arg Lys Glu Val Trp Val Ala Leu
 130 135 140
 Val Val Ala Ser Trp Val Ser Gly Gly Leu His Ser Ile Ile Gln Val
 145 150 155 160
 Ile Leu Met Leu Pro Phe Pro Phe Cys Gly Pro Asn Thr Leu Asp Ala

165	170	175
Phe Tyr Cys Tyr Val Leu Gln Val Val Lys Leu Ala Cys Thr Asp Thr		
180	185	190
Phe Ala Leu Glu Leu Phe Met Ile Ser Asn Asn Gly Leu Val Thr Leu		
195	200	205
Leu Trp Phe Leu Leu Leu Leu Gly Ser Tyr Thr Val Ile Leu Val Met		
210	215	220
Leu Arg Ser His Ser Gly Glu Gly Arg Asn Lys Ala Leu Ser Thr Cys		
225	230	235
Thr Ser His Met Leu Val Val Thr Leu His Phe Val Pro Cys Val Tyr		
245	250	255
Ile Tyr Cys Arg Pro Phe Met Thr Leu Pro Met Asp Thr Thr Ile Ser		
260	265	270
Ile Asn Asn Thr Val Ile Thr Pro Met Leu Asn Pro Ile Ile Tyr Ser		
275	280	285
Leu Arg Asn Gln Glu Met Lys Ser Ala Met Gln Arg Leu Gln Arg Arg		
290	295	300
Leu Gly Pro Ser Glu Ser Arg Lys Trp Gly		
305	310	

<210> 47
 <211> 953
 <212> DNA
 <213> Homo sapiens

<400> 47
 atcatggacc agatcaacca cactaatgtg aagcagtttt tcttcctgga acttacacgt 60
 tcccagagagc tggagttttt cttgtttgtg gtcttctttg ctgtgtatgt agcaacagtc 120
 ctgggaaatg cactcattgt ggtcactatt acctgtgagt cccgcctaca cactcctatg 180
 tactttctcc tgcggaacaa atcagtcctg gacatcggtt ttcatctat caccgtcccc 240
 aagttcctgg tggatctttt atcagacagg aaaaccatct cctacaatgg ctgcatggca 300
 cagatctttt tcttccactt tgcctggtgg gcagatattt ttttcctctc tgtgatggcc 360
 tatgacagat accttgcaat cgccaagccc ctgcactatg tgacatgat gaggaaagag 420
 gtgtgggtgg ccttggtggt ggcttcttgg gtgagtgggt gtttgcatte aatcatccag 480
 gtaattctga tgcttccatt ccccttctgt ggccccaaca cactggatgc cttctactgt 540
 tatgtgctcc aggtggtaaa actggcctgc actgacacct ttgctttgga gcttttcatg 600
 atctctaaca acggactggt gacctgctc tggttcctcc tgcctctggg ctccctacact 660
 gtcattctgg tgatgctgag atccactct ggggaggggc ggaacaaggc cctctccacg 720
 tgcacgtccc acatgctggt ggtgactctt cacttcgtgc cttgtgttta catctactgc 780
 cggcccttca tgacgtgccc catggacaca accatatcca ttaataacac ggtcattacc 840
 cccatgctga accccatcat ctattccctg agaaatcaag agatgaagtc agccatgcag 900
 aggctgcaga ggagacttgg gccttccgag agcagaaaat ggggggtgagc agt 953

<210> 48
 <211> 314
 <212> PRT

<213> Homo sapiens

<400> 48

Met	Asp	Gln	Ile	Asn	His	Thr	Asn	Val	Lys	Gln	Phe	Phe	Phe	Leu	Glu
1				5					10					15	
Leu	Thr	Arg	Ser	Arg	Glu	Leu	Glu	Phe	Phe	Leu	Phe	Val	Val	Phe	Phe
			20					25					30		
Ala	Val	Tyr	Val	Ala	Thr	Val	Leu	Gly	Asn	Ala	Leu	Ile	Val	Val	Thr
		35					40					45			
Ile	Thr	Cys	Glu	Ser	Arg	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu	Leu	Arg
	50					55					60				
Asn	Lys	Ser	Val	Leu	Asp	Ile	Val	Phe	Ser	Ser	Ile	Thr	Val	Pro	Lys
65					70					75					80
Phe	Leu	Val	Asp	Leu	Leu	Ser	Asp	Arg	Lys	Thr	Ile	Ser	Tyr	Asn	Gly
				85					90					95	
Cys	Met	Ala	Gln	Ile	Phe	Phe	Phe	His	Phe	Ala	Gly	Gly	Ala	Asp	Ile
			100					105					110		
Phe	Phe	Leu	Ser	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Leu	Ala	Ile	Ala	Lys
		115					120					125			
Pro	Leu	His	Tyr	Val	Thr	Met	Met	Arg	Lys	Glu	Val	Trp	Val	Ala	Leu
	130					135					140				
Val	Val	Ala	Ser	Trp	Val	Ser	Gly	Gly	Leu	His	Ser	Ile	Ile	Gln	Val
145					150					155					160
Ile	Leu	Met	Leu	Pro	Phe	Pro	Phe	Cys	Gly	Pro	Asn	Thr	Leu	Asp	Ala
				165					170					175	
Phe	Tyr	Cys	Tyr	Val	Leu	Gln	Val	Val	Lys	Leu	Ala	Cys	Thr	Asp	Thr
			180					185					190		
Phe	Ala	Leu	Glu	Leu	Phe	Met	Ile	Ser	Asn	Asn	Gly	Leu	Val	Thr	Leu
		195					200					205			
Leu	Trp	Phe	Leu	Leu	Leu	Leu	Gly	Ser	Tyr	Thr	Val	Ile	Leu	Val	Met
	210					215					220				
Leu	Arg	Ser	His	Ser	Gly	Glu	Gly	Arg	Asn	Lys	Ala	Leu	Ser	Thr	Cys
225					230					235					240
Thr	Ser	His	Met	Leu	Val	Val	Thr	Leu	His	Phe	Val	Pro	Cys	Val	Tyr
			245						250					255	
Ile	Tyr	Cys	Arg	Pro	Phe	Met	Thr	Leu	Pro	Met	Asp	Thr	Thr	Ile	Ser
			260					265					270		
Ile	Asn	Asn	Thr	Val	Ile	Thr	Pro	Met	Leu	Asn	Pro	Ile	Ile	Tyr	Ser
	275						280					285			

Leu Arg Asn Gln Glu Met Lys Ser Ala Met Gln Arg Leu Gln Arg Arg
 290 295 300

Leu Gly Pro Ser Glu Ser Arg Lys Trp Gly
 305 310

<210> 49
 <211> 1018
 <212> DNA
 <213> Homo sapiens

<400> 49
 tgttttgaat gataggcctt ctataacaaa atctctcccc aggtggttga agaacaagaa 60
 gaaacatgat cccttgagc agggaaatta caccaggggg aaggaatctc ttttttcaag 120
 gactgaccca gtcccaagag ctgagcttgg tcttatttct tttcttattt tttgtgtact 180
 cagcaactgt gctgggtaac ctctcatca tggctgtggt gacctgtgag tctcgcttc 240
 acacccccac gtacttcctg ctctgcaatc tctctgtgtt gggtatctgc ttctcctcca 300
 tcaactgctg gaaggtgcta atagacctt caagcagaaa gacctctcc ttcaatgggt 360
 gcatgacaca gatgtttttc ttccacctcc tcggtgggac agacgtttt tctctctttg 420
 tgatggcggt tgaccaatac atggccatct tcaagccct gcaactgtgtg accatcgtga 480
 gtaggggaca gtgtcccta catcgtgagg ctctctgggt ggggggtttg tccactccat 540
 tgtgcaggta tttctgttg tccactccct tctgtggaca tcatatgatt gatggtttct 600
 actgtgatgt cccccaggc ctcaaacttg cctgcaccca cacttttct cttgaggtct 660
 taatgatttc caataatggc ttgatctcta tgcgtgtggt catctttctc ctcatatctt 720
 acacggtcat cttgatgatg ctgaggtctc acactgagga aggcaggagg aaagccatcg 780
 ccacctgcac ctccacatc actgtggtga ccctgcattt cgtgccctgc atctatgtgc 840
 atgccagcc ttactgccc ctccccacgg acagagctgt ctccatcacc ttacagtc 900
 ttattcctgt cctgaacccc atgatctaca ccctgaggaa ccaggagatg aagtcagcct 960
 tgaggaggcg gaagaaaaga ccttctggaa agggatagat gctacgaagt ccagattg 1018

<210> 50
 <211> 310
 <212> PRT
 <213> Homo sapiens

<400> 50
 Met Ile Pro Leu Ser Arg Glu Ile Thr Pro Gly Gly Arg Asn Leu Phe
 1 5 10 15

Phe Gln Gly Leu Thr Gln Ser Gln Glu Leu Ser Leu Val Leu Phe Leu
 20 25 30

Phe Leu Phe Phe Val Tyr Ser Ala Thr Val Leu Gly Asn Leu Leu Ile
 35 40 45

Met Val Val Val Thr Cys Glu Ser Arg Leu His Thr Pro Thr Tyr Phe
 50 55 60

Leu Leu Cys Asn Leu Ser Val Leu Val Ile Cys Phe Ser Ser Ile Thr
 65 70 75 80

Ala Arg Lys Val Leu Ile Asp Leu Ser Ser Arg Lys Thr Ile Ser Phe
 85 90 95

Asn Gly Cys Met Thr Gln Met Phe Phe Phe His Leu Leu Gly Gly Thr

100	105	110
Asp Val Phe Ser Leu Phe Val Met Ala Phe Asp Gln Tyr Met Ala Ile 115 120 125		
Phe Lys Pro Leu His Cys Val Thr Ile Val Ser Arg Gly Gln Cys Ser 130 135 140		
Leu His Arg Glu Ala Ser Trp Val Gly Gly Leu Ser Thr Pro Leu Cys 145 150 155 160		
Arg Tyr Phe Cys Cys Ser Thr Pro Phe Cys Gly His His Met Ile Asp 165 170 175		
Gly Phe Tyr Cys Asp Val Pro Gln Val Leu Lys Leu Ala Cys Thr His 180 185 190		
Thr Phe Ala Leu Glu Val Leu Met Ile Ser Asn Asn Gly Leu Ile Ser 195 200 205		
Met Leu Trp Phe Ile Phe Leu Leu Ile Ser Tyr Thr Val Ile Leu Met 210 215 220		
Met Leu Arg Ser His Thr Glu Glu Gly Arg Arg Lys Ala Ile Ala Thr 225 230 235 240		
Cys Thr Ser His Ile Thr Val Val Thr Leu His Phe Val Pro Cys Ile 245 250 255		
Tyr Val His Ala Gln Pro Ser Leu Pro Leu Pro Thr Asp Arg Ala Val 260 265 270		
Ser Ile Thr Phe Thr Val Ile Ile Pro Val Leu Asn Pro Met Ile Tyr 275 280 285		
Thr Leu Arg Asn Gln Glu Met Lys Ser Ala Leu Arg Arg Arg Lys Lys 290 295 300		
Arg Pro Ser Gly Lys Gly 305 310		

<210> 51

<211> 958

<212> DNA

<213> Homo sapiens

<400> 51

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aaatatgaca acacaccgaa atgacaccct ctccactgaa gcttcagact tcctcctgaa 60
ttgttttgtc agatccccc a gctggcagca ctggctgtcc ctgcccctca gcctcctttt 120
cctcttggcc gtaggggcca acaccaccct cctgacgacc atctggctgg aggcctctct 180
gcaccagccc ctgtactacc tgctcagcct cctctocctg ctgggcatcg tgctctgcct 240
cactgtcatc cccaagggtc tgaccatctt ctggtttgac ctcaggccca tcagcttccc 300
tgctgtcttc ctccagatgt acatcatgaa ttgtttccta gccatggagt cttgcacatt 360
catggtcatg gcctatgatc gttatgtagc catctgccac ccactgagat atccatcaat 420
catcactgat cactttgtag tcaaggctgc catgtttatt ttgaccagaa atgtgcttat 480
gactctgccc atccccatcc tttcagcaca actccgttat tgtggaagaa atgtcattga 540

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gaactgcac tgtgccaata tgtctgtttc cagactctcc tgcgatgatg tcaccatcaa 600
 tcacctttac cagtttgctg gaggctggac tctgctagga tctgacctca tccttatctt 660
 cctctcctac accttcattc tgcgagctgt gctgagactc aaggcagagg gtgccgtggc 720
 aaaggcccta agcacatgtg gctcccaactt catgctcatc ctcttcttca gcaccatcct 780
 tctggttttt gtcctcacac atgtggctaa gaagaaagtc tcccctgatg tgccagtctt 840
 gctcaatgtt ctccaccatg tcattcctgc agcccttaac cccatcattt acgggggtgag 900
 aaccaagaa attaagcagg gaatgcagag gttgttgaag aaagggtgct aacaagga 958

<210> 52

<211> 315

<212> PRT

<213> Homo sapiens

<400> 52

Met	Thr	Thr	His	Arg	Asn	Asp	Thr	Leu	Ser	Thr	Glu	Ala	Ser	Asp	Phe
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Leu	Leu	Asn	Cys	Phe	Val	Arg	Ser	Pro	Ser	Trp	Gln	His	Trp	Leu	Ser
		20						25					30		
Leu	Pro	Leu	Ser	Leu	Leu	Phe	Leu	Leu	Ala	Val	Gly	Ala	Asn	Thr	Thr
	35						40					45			
Leu	Leu	Thr	Thr	Ile	Trp	Leu	Glu	Ala	Ser	Leu	His	Gln	Pro	Leu	Tyr
	50					55					60				
Tyr	Leu	Leu	Ser	Leu	Leu	Ser	Leu	Leu	Gly	Ile	Val	Leu	Cys	Leu	Thr
65				70					75					80	
Val	Ile	Pro	Lys	Val	Leu	Thr	Ile	Phe	Trp	Phe	Asp	Leu	Arg	Pro	Ile
			85					90						95	
Ser	Phe	Pro	Ala	Cys	Phe	Leu	Gln	Met	Tyr	Ile	Met	Asn	Cys	Phe	Leu
		100						105					110		
Ala	Met	Glu	Ser	Cys	Thr	Phe	Met	Val	Met	Ala	Tyr	Asp	Arg	Tyr	Val
	115						120					125			
Ala	Ile	Cys	His	Pro	Leu	Arg	Tyr	Pro	Ser	Ile	Ile	Thr	Asp	His	Phe
	130					135					140				
Val	Val	Lys	Ala	Ala	Met	Phe	Ile	Leu	Thr	Arg	Asn	Val	Leu	Met	Thr
145					150					155				160	
Leu	Pro	Ile	Pro	Ile	Leu	Ser	Ala	Gln	Leu	Arg	Tyr	Cys	Gly	Arg	Asn
			165						170					175	
Val	Ile	Glu	Asn	Cys	Ile	Cys	Ala	Asn	Met	Ser	Val	Ser	Arg	Leu	Ser
		180						185					190		
Cys	Asp	Asp	Val	Thr	Ile	Asn	His	Leu	Tyr	Gln	Phe	Ala	Gly	Gly	Trp
	195						200					205			
Thr	Leu	Leu	Gly	Ser	Asp	Leu	Ile	Leu	Ile	Phe	Leu	Ser	Tyr	Thr	Phe
	210					215					220				

Ile Leu Arg Ala Val Leu Arg Leu Lys Ala Glu Gly Ala Val Ala Lys
 225 230 235 240
 Ala Leu Ser Thr Cys Gly Ser His Phe Met Leu Ile Leu Phe Phe Ser
 245 250 255
 Thr Ile Leu Leu Val Phe Val Leu Thr His Val Ala Lys Lys Lys Val
 260 265 270
 Ser Pro Asp Val Pro Val Leu Leu Asn Val Leu His His Val Ile Pro
 275 280 285
 Ala Ala Leu Asn Pro Ile Ile Tyr Gly Val Arg Thr Gln Glu Ile Lys
 290 295 300
 Gln Gly Met Gln Arg Leu Leu Lys Lys Gly Cys
 305 310 315

<210> 53
 <211> 980
 <212> DNA
 <213> Homo sapiens

<400> 53
 ttccagagat gaacctgata aaggatctgt gattcaatgg atcagagaaa ttacaccaga 60
 gtgaaagaat ttaccttctt gggaattact cagtcccagag aactgagcca ggtcttattt 120
 accttctgtg ttttggtgta catgacaact ctaatgggaa acttctctcat catggttaca 180
 gttacctgtg aatctcacct tcatacgccc atgtacttcc tgctccgcaa cctgtctatt 240
 cttgacatct gcttttcctc catcacagct cctaaggctc tgatagatct tctatcagag 300
 aaaaaaacca tctccttcag tggctgtgtc actcaaatgt tcttcttcca ccttctgggg 360
 ggagcagacg ttttttctct ctctgtgatg gcgtttgacc gctatatagc catctccaag 420
 cccctgcact atatgaccat catgagtagg gggcgatgca caggcctcat ccaactccata 480
 gcgcagattt ctctattgct cccactccct gtctgtggac ccaatgttct tgacactttc 540
 tactgcgatg tccccaggt cctcaaactt gcctgcactg acaccttcac tctggagctc 600
 ctgatgattt caaataatgg gttagtcagt tggtttgat tcttctttct cctcatatct 660
 tacacggtca tcttgatgat gctgaggtct cacactgggg aaggcaggag gaaagccatc 720
 tccacctgca cctcccatat caccgtggtg accctgcatt tcgtgccctg catctatgtc 780
 tatgcccggc ccttcaactgc cctccccaca gacactgcc a tctctgtcac cttcaactgtc 840
 atctcccctt tgctcaatcc tataatttac acgctgagga atcaggaaat gaagttggcc 900
 atgaggaaac tgaagagacg gctaggacaa tcagaaagga ttttaattca ataagggtaa 960
 gatagtaccc atatttaaag 980

<210> 54
 <211> 305
 <212> PRT
 <213> Homo sapiens

<400> 54
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 1 5 10 15
 Ile Thr Gln Ser Arg Glu Leu Ser Gln Val Leu Phe Thr Phe Leu Phe
 20 25 30
 Leu Val Tyr Met Thr Thr Leu Met Gly Asn Phe Leu Ile Met Val Thr

35					40					45					
Val	Thr	Cys	Glu	Ser	His	Leu	His	Thr	Pro	Met	Tyr	Phe	Leu	Leu	Arg
50						55					60				
Asn	Leu	Ser	Ile	Leu	Asp	Ile	Cys	Phe	Ser	Ser	Ile	Thr	Ala	Pro	Lys
65					70					75					80
Val	Leu	Ile	Asp	Leu	Leu	Ser	Glu	Thr	Lys	Thr	Ile	Ser	Phe	Ser	Gly
				85					90					95	
Cys	Val	Thr	Gln	Met	Phe	Phe	Phe	His	Leu	Leu	Gly	Gly	Ala	Asp	Val
			100					105					110		
Phe	Ser	Leu	Ser	Val	Met	Ala	Phe	Asp	Arg	Tyr	Ile	Ala	Ile	Ser	Lys
		115					120					125			
Pro	Leu	His	Tyr	Met	Thr	Ile	Met	Ser	Arg	Gly	Arg	Cys	Thr	Gly	Leu
		130				135					140				
Ile	His	Ser	Ile	Ala	Gln	Ile	Ser	Leu	Leu	Leu	Pro	Leu	Pro	Val	Cys
145					150					155					160
Gly	Pro	Asn	Val	Leu	Asp	Thr	Phe	Tyr	Cys	Asp	Val	Pro	Gln	Val	Leu
				165					170					175	
Lys	Leu	Ala	Cys	Thr	Asp	Thr	Phe	Thr	Leu	Glu	Leu	Leu	Met	Ile	Ser
			180					185					190		
Asn	Asn	Gly	Leu	Val	Ser	Trp	Phe	Val	Phe	Phe	Phe	Leu	Leu	Ile	Ser
		195					200					205			
Tyr	Thr	Val	Ile	Leu	Met	Met	Leu	Arg	Ser	His	Thr	Gly	Glu	Gly	Arg
		210				215					220				
Arg	Lys	Ala	Ile	Ser	Thr	Cys	Thr	Ser	His	Ile	Thr	Val	Val	Thr	Leu
225					230					235					240
His	Phe	Val	Pro	Cys	Ile	Tyr	Val	Tyr	Ala	Arg	Pro	Phe	Thr	Ala	Leu
				245					250					255	
Pro	Thr	Asp	Thr	Ala	Ile	Ser	Val	Thr	Phe	Thr	Val	Ile	Ser	Pro	Leu
			260					265					270		
Leu	Asn	Pro	Ile	Ile	Tyr	Thr	Leu	Arg	Asn	Gln	Glu	Met	Lys	Leu	Ala
		275					280					285			
Met	Arg	Lys	Leu	Lys	Arg	Arg	Leu	Gly	Gln	Ser	Glu	Arg	Ile	Leu	Ile
		290				295					300				
Gln															
305															

<210> 55
 <211> 955
 <212> DNA

<213> Homo sapiens

<400> 55

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taatgggaaa cttcctcatc atgggttacag ttacctgtga atctcacctt catacgccca 180
tgtacttcct gctccgcaac ctgtctattc ttgacatctg cttttcctcc atcacagctc 240
ctaaggtcct gatagatctt ctatcagaga caaaaaccat ctccttcagt ggctgtgtca 300
ctcaaatgtt cttcttcac cttctggggg gagcagacgt tttttctctc tctgtgatgg 360
cgtttgaccg ctatatagcc atctccaagc cctgcacta tatgaccatc atgagtaggg 420
ggcgatgcac aggctcatc gtggcttcct ggggtggggg ctttgtccac tccatagcgc 480
agatttctct attgctccca ctccctttct gtggacccaa tgttcttgac actttctact 540
gcgatgtccc ccaggctctc aaacttgccc gcactgacac cttcactctg gagctcctga 600
tgatttcaaa taatgggtta gtcagttggt ttgtattctt ctttctcctc atatcttaca 660
cggctcatct gatgatgctg aggtctcaca ctggggaagg caggaggaaa gccatctcca 720
cctgcacctc ccacatcacc gtggtgaccc tgcatttcgt gccctgcac tatgtctatg 780
cccggccctt cactgccctc cccacagaca ctgccatctc tgtcaccttc actgtcatct 840
cccctttgct caatcctata atttacacgc tgaggaatca ggaaatgaag ttggccatga 900
ggaaactgaa gagacggcta ggacaatcag aaaggatttt aattcaataa gggtta 955
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<210> 56

<211> 314

<212> PRT

<213> Homo sapiens

<400> 56

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Met Asp Gln Arg Asn Tyr Thr Arg Val Lys Glu Phe Thr Phe Leu Gly
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Ile Thr Gln Ser Arg Glu Leu Ser Gln Val Leu Phe Thr Phe Leu Phe
      20             25             30

Leu Val Tyr Met Thr Thr Leu Met Gly Asn Phe Leu Ile Met Val Thr
      35             40             45

Val Thr Cys Glu Ser His Leu His Thr Pro Met Tyr Phe Leu Leu Arg
      50             55             60

Asn Leu Ser Ile Leu Asp Ile Cys Phe Ser Ser Ile Thr Ala Pro Lys
      65             70             75             80

Val Leu Ile Asp Leu Leu Ser Glu Thr Lys Thr Ile Ser Phe Ser Gly
      85             90             95

Cys Val Thr Gln Met Phe Phe Phe His Leu Leu Gly Gly Ala Asp Val
      100            105            110

Phe Ser Leu Ser Val Met Ala Phe Asp Arg Tyr Ile Ala Ile Ser Lys
      115            120            125

Pro Leu His Tyr Met Thr Ile Met Ser Arg Gly Arg Cys Thr Gly Leu
      130            135            140

Ile Val Ala Ser Trp Val Gly Gly Phe Val His Ser Ile Ala Gln Ile
      145            150            155            160
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Ser Leu Leu Leu Pro Leu Pro Phe Cys Gly Pro Asn Val Leu Asp Thr
 165 170 175
 Phe Tyr Cys Asp Val Pro Gln Val Leu Lys Leu Ala Arg Thr Asp Thr
 180 185 190
 Phe Thr Leu Glu Leu Leu Met Ile Ser Asn Asn Gly Leu Val Ser Trp
 195 200 205
 Phe Val Phe Phe Phe Leu Leu Ile Ser Tyr Thr Val Ile Leu Met Met
 210 215 220
 Leu Arg Ser His Thr Gly Glu Gly Arg Arg Lys Ala Ile Ser Thr Cys
 225 230 235 240
 Thr Ser His Ile Thr Val Val Thr Leu His Phe Val Pro Cys Ile Tyr
 245 250 255
 Val Tyr Ala Arg Pro Phe Thr Ala Leu Pro Thr Asp Thr Ala Ile Ser
 260 265 270
 Val Thr Phe Thr Val Ile Ser Pro Leu Leu Asn Pro Ile Ile Tyr Thr
 275 280 285
 Leu Arg Asn Gln Glu Met Lys Leu Ala Met Arg Lys Leu Lys Arg Arg
 290 295 300
 Leu Gly Gln Ser Glu Arg Ile Leu Ile Gln
 305 310

<210> 57

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 57

acgtctgtgt tatgttggt tt

22

<210> 58

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 58

cttttccttc atgacacacc gctttg

26

<210> 59
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 59
 ggatgtaatg agggatggtg tg 22

 <210> 60
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 60
 acttcggcct tatgtacctc at 22

 <210> 61
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:
 oligonucleotide primer

 <400> 61
 actgtgatga ggccttacac agacct 26

 <210> 62
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 62
 gcacatctgt gaaggaaaga ag 22

 <210> 63
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 63
 acgtctgtgt tatgttggt tt 22

 <210> 64
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 64
 cttttccttc atgacacacc gctttg 26

 <210> 65
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 65
 ggatgtaatg agggatgttg tg 22

 <210> 66
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 66
 ggccatgttg tctatgattg at 22

 <210> 67
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 67

tctgtccaca tccactatcc ccaaaa 26

<210> 68
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 68
ttgaaccaga agattcctag ca 22

<210> 69
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 69
ctacacgacg gtcctgactg ggt 23

<210> 70
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 70
catcaccaag attggcatgg ctgctgtggc 30

<210> 71
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 71
aaggggagtg gagtcattag tg 22

<210> 72
<211> 22

<212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 72
 catattctgg ttcagggatc ag 22

 <210> 73
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 73
 caacttcttt gcctgtctgg tccaga 26

 <210> 74
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 74
 atggagaagg agtgaaggaa ga 22

 <210> 75
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 75
 ctttatccct tcaggcagtt ct 22

 <210> 76
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide

primer

<400> 76
actctcctct cagaggcccg ctacaa 26

<210> 77
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 77
gtgagagaca catgtcccaa at 22

<210> 78
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 78
taacacatcc aactgccttc tt 22

<210> 79
<211> 23
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 79
aggcctggaa cacctgcaca tct 23

<210> 80
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 80
ctaagcagaa agggatggag at 22

<210> 81
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 81
 taacacatcc aactgccttc tt 22

 <210> 82
 <211> 23
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 82
 aggcttgaa cacctgcaca tct 23

 <210> 83
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 83
 ctaagcagaa agggatggag at 22

 <210> 84
 <211> 22
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

 <400> 84
 ttttcttg tggtgagaa ag 22

 <210> 85
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

<400> 85
 tctctacatc tgcaaatacct gccccct 26

<210> 86
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

<400> 86
 gccatcaagc aacaacaata at 22

<210> 87
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

<400> 87
 ttccctactg gggacagaat at 22

<210> 88
 <211> 26
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

<400> 88
 tacttttgtg aacctcctgc cctcct 26

<210> 89
 <211> 22
 <212> DNA
 <213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence:oligonucleotide
 primer

<400> 89
gccatttctg tgctgtaagt gt 22

<210> 90
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 90
tctaccttgt gaccctgatt tg 22

<210> 91
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 91
catgggtctt atcatcctca tcagaa 26

<210> 92
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 92
atgggtgtgt tcagatgaga gt 22

<210> 93
<211> 22
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:oligonucleotide
primer

<400> 93
ctgacatcat cacagagcag aa 22

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